




# EDF Group

# 2009 Document de référence

**French société anonyme**
**with a share capital of €924,433,331**
**Registered head office: 22-30, avenue de Wagram**
**75382 Paris Cedex 08**
**552 081 317 RCS Paris**

# EDF group
# 2009 Document de Référence

This document is an unofficial translation of the French *Document de Référence* filed with the *Autorité des marchés financiers* (the "AMF") on April 8, 2010 in accordance with article 212-13 of the AMF General Regulations. This unofficial translation has been prepared by EDF for informational purposes only and has not been reviewed or registered with the AMF. The French *Document de Référence* may be used for purposes of a financial transaction if supplemented with an offering memorandum (*note d'opération*) that received a visa from the AMF. The French *Document de Référence* has been prepared by the issuer and its signatories are responsible for its content. In the event of any ambiguity or discrepancy between this unofficial translation and the French *Document de Référence*, the French version shall prevail.

Pursuant to Article 28 of the European Commission Regulation n° 809/2004, the following information is incorporated by reference into this *Document de Référence*:

- consolidated financial statements of the EDF group for the year ended December 31, 2008, prepared in accordance with international accounting standards, as well as the accompanying statutory auditors' reports, set forth respectively in section 20.1 (pages 229 to 335) and section 20.2 (pages 338 and 339) of the EDF group's 2008 *Document de Référence*;
- consolidated financial statements of the EDF group for the year ended December 31, 2007, prepared in accordance with international accounting standards, as well as the accompanying statutory auditors' reports, set forth respectively in section 20.1 (pages 207 to 307) and section 20.2 (pages 308 to 309) of the EDF group's 2007 *Document de Référence*; and
- the discussion of the EDF group financial situation and results for the year ended December 31, 2008, presented on pages 134 to 183 in Chapter 9 of the EDF group's 2008 *Document de Référence*.

Copies of this *Document de Référence* are available free of charge at EDF (22-30, avenue de Wagram, 75382 Paris Cedex 08) and on the EDF website (http://www.edf.com) as well as on the AMF website (http://www.amf-france.org).

# Table of contents

In this *Document de Référence* (the *"Document de Référence"*), unless otherwise stated, the references to "**Company**" and "**EDF**" refer to EDF SA, the parent company, and the references to "**EDF group**" and "**Group**" refer to EDF and its subsidiaries and shareholdings.

In addition to the information contained in this *Document de Référence*, investors should carefully consider the risk factors described in section 4.2 ("**Risk Factors**"). These risks, or one of these risks, could negatively impact the Group's activity, situation or financial results. Furthermore, other risks, which have not yet been identified or considered as material by the Group, could have the same negative impact and investors could consequently lose all or part of their investment in the Company.

Moreover, this *Document de Référence* contains information relating to the markets in which the EDF group is present. This information has been taken from surveys carried out by external sources. Considering the very rapid changes that characterize the energy sector in France and in the world, it is possible that this information could prove to be erroneous or no longer be up to date. The Group's activities could consequently evolve in a manner different from those described in this *Document de Référence* and the declarations or information appearing in this *Document de Référence* could prove to be erroneous.

The forward-looking statement within this *Document de Référence*, notably in section 6.1 ("**Strategy**"), could also be impacted by risks, uncertainties or other factors that may cause the future results, performances and achievements of the Group to differ significantly from the objectives expressed and suggested. These factors may include changes in economic and commercial environment or in regulations as well as to the factors set forth in section 4.2 ("**Risk Factors**").

Pursuant to European and French legislation, the entities responsible for the transmission and distribution of electricity within the EDF group may not communicate certain information they gather within the framework of their activities to the other entities of the Group, including its Management. Similarly, certain data specific to generation and marketing activities may not be communicated to the entities responsible for transmission and distribution. This *Document de Référence* has been prepared by the EDF group in compliance with these rules.

A glossary for the major technical terms is provided at the end of this *Document de Référence*, before the Appendices.

# Persons responsible

1



## 1.1 Person responsible for the *Document de Référence*

Henri Proglio,
EDF Chairman and Chief Executive Officer

## 1.2 Certification from the person responsible for the *Document de Référence* containing the annual financial report

"Having taken all reasonable care to ensure that such is the case, I certify that, to the best of my knowledge, the information contained in this *Document de Référence* accurately reflects the facts and contains no omission likely to affect its meaning.

I certify that, to the best of my knowledge, the financial statements are prepared in accordance with accounting standards and that they give a true and fair view of the assets and liabilities, financial position and the income of the Company and of all the companies included in the consolidation, and that the management report (*Rapport de gestion*) reports a true and fair view of the business trends, the income and the financial position of the Company and of all the companies included in the consolidation and a description of the main risks and uncertainties they face.

I have obtained a letter from the statutory auditors certifying that they have verified the financial and accounting information provided in this *Document de Référence* and that they have read the document in entirety.

The consolidated financial statements for the financial year ended December 31, 2009, prepared in accordance with IAS-IFRS standards, as adopted by the European Union, and included in this *Document de Référence* in section 20.1 ("Historical Financial Information"), have been reviewed by the statutory auditors. Their report is set forth in section 20.2 ("Statutory auditors' Report on the consolidated financial statements of the year ended December 31, 2009") of this *Document de Référence*.

Without qualifying their opinion, the statutory auditors, in their report on the consolidated financial statements for the year ended December 31, 2009, draw the reader's attention to the changes in accounting principles described in notes 1.2, 2 and 8, and the following points (as in their reports on the consolidated financial statements on the fiscal years 2007 and 2008):

- the valuation of long-term provisions relating to nuclear electricity production, as described in notes 3.22 and 35 to the consolidated financial statements, results as indicated in note 3.2.1 from management's best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning;
- the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 3.24, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed annually to the grantors described in activity reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 3.24 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates."

Henri Proglio,
Chairman and CEO of EDF

# 2 Auditors



## 2.1 Statutory auditors

Deloitte et Associés,
185, avenue Charles de Gaulle, 92200 Neuilly-sur-Seine, represented by Mr. Alain Pons and Mr. Tristan Guerlain.

KPMG SA,
Immeuble Le Palatin, 3, Cours du Triangle, 92939 Paris La Défense Cedex, represented by Mr. Jean-Luc Decornoy and Mr. Michel Piette.

Appointed by a decision at the ordinary Shareholders' Meeting of June 6, 2005 for a period of six financial years, this term expires at the end of the ordinary Shareholders' Meeting which will approve the accounts for the financial year ending on December 31, 2010.

The auditors designated above have thus certified the accounts presented in this *Document de Référence*.

## 2.2 Alternate auditors

BEAS,
7-9, Villa Houssay, 92200 Neuilly-sur-Seine.

SCP Jean-Claude André,
2 bis, rue de Villiers, 92300 Levallois-Perret.

Appointed by a decision at the ordinary Shareholders' Meeting of June 6, 2005 for a period of six financial years, this term expires at the end of the Shareholders' Meeting which will approve the accounts for the financial year ending on December 31, 2010.

# 3 Selected financial information

## Preamble

Pursuant to European regulation n° 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the Group's consolidated financial statements for the year ended December 31, 2009, are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2009. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations (SIC and IFRIC).

## Key financial information

The selected financial information is taken from the EDF group's consolidated financial statements at December 31, 2009, which have been audited by EDF's auditors.

The selected financial information below must be read in conjunction with (i) the consolidated financial statements included in section 20.1 ("Historical Financial Information") of this *Document de Référence*, and (ii) the operating and financial review contained in Chapter 9 of this *Document de Référence*.

## Extracts from the consolidated income statements

| *(in millions of Euros)* | **2009[2]** | 2008[1] |
|---|---|---|
| Sales | 66,336 | 63,847 |
| Operating profit before depreciation and amortization (EBITDA) | 17,466 | 14,240 |
| Operating profit (EBIT) | 10,107 | 7,910 |
| Income before taxes of consolidated companies[3] | 5,582 | 4,860 |
| **EDF NET INCOME** | **3,905** | **3,484** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" and changes in presentation of Edison trading revenues.*
*(2) Figures for 2009 include the effects of consolidation of:*
*– British Energy from January 5, 2009;*
*– Constellation Energy Nuclear Group, LLC ("CENG") from November 6, 2009;*
*– SPE from November 26, 2009.*
*(3) The income before taxes of the consolidated companies is EDF group's net income before income taxes, share in income of companies accounted for under the equity method, net income from discontinued operations and minority interests.*

## Extracts from the consolidated balance sheets

| *(in millions of Euros)* | **December 31, 2009[2]** | December 31, 2008[1] |
|---|---|---|
| Non-current assets | 180,435 | 141,336 |
| Current assets | 60,214 | 59,154 |
| Assets classified as held for sale | 1,265 | 2 |
| **TOTAL ASSETS** | **241,914** | **200,492** |
| Equity (EDF's share) | 27,952 | 23,197 |
| Minority interests | 4,773 | 1,801 |
| Non-current provisions | 52,134 | 43,415 |
| Other non-current liabilities | 98,016 | 73,862 |
| Current liabilities | 58,628 | 58,217 |
| Liabilities related to assets classified as held for sale | 411 | 0 |
| **TOTAL EQUITY AND LIABILITIES** | **241,914** | **200,492** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" and changes in presentation of Edison trading revenues.*
*(2) Figures for 2009 include the effects of consolidation of:*
*– British Energy from January 5, 2009;*
*– CENG from November 6, 2009;*
*– SPE from November 26, 2009.*

# Extracts from the consolidated cash flow statements

| *(in millions of Euros)* | **2009[2]** | 2008[1] |
|---|---|---|
| Net cash flow from operating activities | 12,374 | 7,572 |
| Net cash flow used in investing activities | (24,944) | (16,665) |
| Net cash flow used from financing activities | 13,910 | 8,811 |
| **NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS** | **1,340** | **(282)** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" and changes in presentation of Edison trading revenues.*
*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *CENG from November 6, 2009;*
- *SPE from November 26, 2009.*

# Information concerning net indebtedness

| *(in millions of Euros)* | **December 31, 2009** | December 31, 2008 |
|---|---|---|
| Loans and other financial liabilities | 53,868 | 37,451 |
| Derivatives used to hedge liabilities | 373 | (381) |
| Cash and cash equivalents | (6,982) | (5,869) |
| Liquid assets | (4,735) | (6,725) |
| Net financial liabilities from companies disclosed in non-current liabilities related to assets classified as held for sale | (28) | 0 |
| **NET INDEBTEDNESS** | **42,496** | **24,476** |

# Risk factors

4



4.1

# Risk management and control in the EDF group

## 4.1.1 General framework for managing and controlling the Group's risks

For many years the EDF group has pursued a policy of managing its operational, financial and organizational risks (see "Report of the Chairman of the Board of Directors of EDF on corporate governance and internal controls" shown in Appendix A to this *Document de Référence*).

In 2003, given the changing context, the Group decided to implement an overall process for managing and controlling its risks, reinforcing existing plans, in particular by creating the Corporate Risk Management Division (*Direction Contrôle des Risques Groupe*, or "DCRG").

The objectives of the management and control policy are to:

- allow identification and ranking of risks in all domains to gain increasingly firm control over them, under the responsibility of operational management;
- allow Officers, directors and the Group's governance bodies to have a consolidated view, regularly updated, of the major risks and their level of control;
- contribute to safeguarding the Group's strategic and financial business plan;
- meet the expectations and inform external stakeholders on the risks of the Group and the process for their management.

### 4.1.1.1 RISK MANAGEMENT AND CONTROL PRINCIPLES

As a general rule, operational and functional entities are responsible for managing risks that are within their scope of activity.

The Group's risk control policy is applied either directly with respect to EDF and its controlled subsidiaries, or via the governing bodies in the case of regulated subsidiaries (subsidiaries for which EDF does not exercise operational control due to independent management rules: RTE-EDF Transport and ERDF) or jointly-controlled subsidiaries.

This policy is based on a system of risk control implemented independently of the risk management functions. This system ensures a standard approach for the identification, assessment and control of risks.

According to those principles, every six months EDF establishes a consolidated mapping of its major risks for the entities under its operational control or under joint control (except for Dalkia International), based on their representations. The consolidated mapping is approved every six months, by the Executive Committee and presented to the audit Committee of the Board of Directors (see section 14.2.3 ("Executive Committee")).

The global risk mapping process backs up other processes implemented by the Group, in particular, the setup of the audit program, the "Insurance"

policy and its implementation (see section 4.1.3. ("Insurance")), the crisis management policy, the analysis of risks concerning matters examined by the Group's decisional bodies (such as the Executive Committee, the Committee of Commitments and Holdings, the Committee for Fuel Commitments, the Steering UpStream – Downstream – Trading Committee, etc.). The risks' control process in particular contributes to securing the investment and long-term commitments process, by ensuring compliance with the risk analysis methodology principles for matters presented to the Committee of Commitments.

### RTE-EDF TRANSPORT

In relation to RTE-EDF Transport SA ("RTE"), risk management and control are organized at the two management levels concerned:

- at the national level, RTE's Executive Committee approves twice a year the mapping of its major risks which is then presented to the *Comité de Supervision Économique et d'Audit* of the Supervisory Board of RTE. The Executive Committee entrusts a national manager with the responsibility of monitoring the identified risks. RTE's Risk Audit Department carries out the national audits commissioned by the Chairman of the Management Board ("*Président du Directoire*"), to whom it reports its findings and recommendations;
- at the local level, each of RTE's units and functional entities is responsible for its own analysis of the risks associated with its activities, controlling these through appropriate audits, and reporting at a national level.

### ÉLECTRICITÉ RÉSEAU DISTRIBUTION FRANCE – ERDF

ERDF identifies and manages its risks according to Group methodology. Risk control is implemented in application of the Group control principles by a procedure independent of ERDF's operational units, to verify, with reasonable certainty, control of its business:

- a mapping of the major risks relating to the perimeter of ERDF is updated each half year. After the validation by ERDF's Board of Directors, it is presented to the *Comité de Supervision Économique et d'Audit* of ERDF and to the Supervisory Board. For each significant risk identified, an officer (member of the Executive Committee of ERDF) is designated and a national coordinator is responsible for implementing action plans covering associated risks. An annual program of national audits sponsored by the ERDF's Executive Committee built from the risk analysis and led by the Audit Division – Internal Control – Risks of ERDF complements the control system;
- each Regional Operational Division and each Functional Operational Division is responsible for its own analysis of risks relating to its activity. To do this, it conducts an upstream risk analysis using the transversal methodology used within ERDF. The internal control plans are subject to a reporting and a consolidation at a national level.

The progress of the audit program, of the internal control and of the efficiency of the improvement actions taken are also subject to validation by the Board of Directors and to a semi-annual presentation to the *Comité de Supervision Économique et d'Audit*.

## 4.1.1.2 MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

The risk factor relating to the wholesale energy market and $CO_2$ emissions trading is described in section 4.2.2 ("Risks related to the Group's activities") below.

### 4.1.1.2.1 FRAMEWORK OF THE MANAGEMENT OF ENERGY MARKET RISK

In conjunction with the opening of the final customers' market, developments of the wholesale markets and on the international scene, the EDF group is exposed to price variations on the energy market which can have a significant impact on its financial results.

As a consequence, an "Energy markets risks" policy (concerning electricity, gas, coal, oil products and $CO_2$ emission allowances) is set up by the EDF group and applicable to EDF and entities under its operational control (see section 9.9.2 ("Management and control of energy market risks")).

Regarding Edison, EnBW and Constellation Energy Nuclear Group, LLC ("CENG"), jointly controlled entities, their "Energy markets risks" policies are reviewed by the governance bodies of such companies.

The "Energy markets risks" policy of the Group aims at:

- defining the general framework within which different entities of the Group carry out their operational activities (energy generation, optimization and distribution), as well as articulating it with EDF Trading;
- consolidating the exposure of the different subsidiaries and entities under EDF's operational control in the various structured markets related to energy;
- implementing a coordinated hedging policy at Group level.

Principles of operational management of the energy market risks are based on clarifying the responsibilities for managing energy market risks and distinguishing what forms part of generation assets management on the one hand, and trading on the other hand.

Generation and supply assets managers are responsible for implementing a risk management strategy minimizing the impact of energy market risks on their financial results. Yet they remain exposed to a risk which cannot be covered on the markets, given different factors such as the lack of liquidity or depth of the markets, the uncertainty on volumes, etc. This could have a material effect on the Group's financial results.

Within the Group, positions relating to energy markets are mainly taken by EDF Trading, which is the trading entity of the Group. As such, EDF Trading is subject to a strict governance and control framework.

The principles of operational management of the energy market risk are subject to monitoring indicators, to limits and to sensitivity scenarios of positions, ensuring the control of risks (see section 9.9.2 ("Management and control of energy market risks")).

### 4.1.1.2.2 CONTROL ORGANIZATION

The process for controlling energy market risks for Companies in which the Group operates operational control is based on:

- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- an express delegation given to each entity and formalized by risk management mandates establishing, among other things, the risk limits. These mandates allow the Executive Committee annually to set a consolidated risk profile on this scope, consistent with the financial objectives and thus to direct operational management of energy market risks (typically for a three-year period);
- a specific control process given its strong interactions with the decisions made within the generation and supply businesses. The process involves the Group's Management and is based on a risk indicator and measure system, itself based on a control comprising in particular alert procedures in case the risk limits are exceeded.

Concerning the jointly controlled entities, the control process is reviewed by the governance bodies of such companies.

The consolidated exposure in "Energy markets" risks of the entities under EDF's operational control is presented to the Executive Committee on a monthly basis. The control processes are regularly reappraised and audited.

## 4.1.1.3 MANAGEMENT AND CONTROL OF FINANCIAL MARKET RISKS

### 4.1.1.3.1 FINANCIAL RISKS MANAGEMENT FRAMEWORK

EDF has implemented a financial risk management framework (see section 9.9.1 ("Financial risks control and management")), which sets forth the policy and principles for managing the Group's financial risks (liquidity, exchange, interest rates and counterparty risks) and is applicable to EDF and only to subsidiaries that are controlled operationally. The Group is subject to equity risk through shares held in the framework of cash activities, through dedicated assets that are set aside to cover long-term nuclear power plant decommissioning provisions, which is subject to an ad hoc risk management framework, through externalized funds for pensions and through direct equity. The above-mentioned principles are associated with monitoring indicators and limits for controlling these risks, in particular, with the objective of limiting the volatility of the Group's financial charges.

All developments in the context of financial risk management must be submitted to EDF's audit Committee and Board of Directors for approval.

EDF also uses stress scenarios to analyze the sensitivity of positions in extreme conditions. This allows EDF to monitor its exposure to significant "Atypical" market swing risks. EDF also uses stop-loss markers, which determine the threshold at which a position must be closed.

### 4.1.1.3.2 CONTROL ORGANIZATION

The Financial Risks Control Division (*Département Contrôle des Risques Financiers,* or "DCRF") is entrusted with the task of controlling the Group's financial risks by ensuring the correct application of financial management principles. This organization also has the task of carrying out a second level check (methodology and organization) of EDF and entities under its operational control, as well as an operational check of the financing activities at the parent level of the Group. The DCRF reports to the Risks Control Division Group (*Direction Contrôle des Risques Groupe*) in order to guarantee the independence between the organization that controls these risks and the risk management activities which are subject to its control.

With respect to the activities of EDF's financial markets front office, daily risk indicator monitoring reports are sent by the DCRF to the Group Treasury Manager, to the head of the front office and to the manager of the DCRF. They are immediately notified to act in the event that limits are breached. The DCRF reports weekly to the Financial Division's Corporate Finance and Treasury Division (*Direction Corporate Finance et Trésorerie,* "DCFT") Operational Coordination Committee. The DCFT's Strategic Committee periodically monitors compliance with the limits and rules on any specific changes to the limits which may be required.

In addition, regular internal audits ensure that controls have been carried out properly. The internal control device covers two levels of control:

- the internal control exercised at the level of the Corporate Finance & Treasury Division: the person in charge of the Financial Risks Control Division (*Département Contrôle des Risques Financiers*) carries out the internal control. A dedicated team is in charge of setting up and performing an annual internal control plan. This plan includes several tasks ensuring the implementation of the control procedures and the respect of the framework for the front office;
- the control exercised by the Group Audit Department (*Direction de l'Audit Groupe*) which plans yearly audits on activities connected with financial markets and with the financial risk control.

In addition, EDF may hire, if necessary, external firms to audit the financial risks control process.

### 4.1.1.3.3 LIQUIDITY RISK

The EDF group aims to have, at any given time, adequate financial resources to finance its everyday business, the investments necessary for its future development, annual allocations to the dedicated assets portfolio to cover long-term nuclear commitments as well as to cope with any exceptional events. The objective of cash flow management is to search for resources at the best price and to ensure that they may be obtained at any given time. A description is set forth in section 9.9.1.1 ("Liquidity situation and liquidity risk management").

EDF has set up regular monitoring of the Group's liquidity risk, incorporated within the business management cycle, including stress scenarios. The Operational Coordination Committee also reviews liquidity needs on a weekly basis.

In the current context of the financial crisis, EDF has strengthened the monitoring and control of liquidity risks linked to margin calls on the financial and energy markets. In particular, risk indicators have been introduced. In addition, a Steering Committee monitors liquidity needs in relation to energy market activities and decides, if necessary, on appropriate corrective measures to be implemented.

### 4.1.1.3.4 EXCHANGE RATE RISK

Due to the diversification of its business and its geographic base, the EDF group is exposed to exchange rate fluctuation risks, which may have an impact on the translation adjustments, Group balance sheet, financial charges, equity and results.

As a rule, the operating cash flows of the parent company and its subsidiaries are denominated in their local currencies, with the exception of flows associated with fuel purchases, which are mainly denominated in US dollars, and certain flows associated with equipment purchases but for less significant amount.

A description is set forth in section 9.9.1.3 ("Management of foreign exchange rate risk").

### 4.1.1.3.5 EQUITY RISK

EDF is exposed to equity risk predominantly on securities held (i) as dedicated assets constituted to hedge the cost of long-term commitments associated with nuclear power, (ii) in the context of its cash assets, (iii) in the context of externalized funds for pensions and (iv) in direct investment.

A description is set forth in sections 9.9.1.5 ("Management of equity risks") and 9.9.1.6 ("Management of financial risk on EDF's dedicated asset portfolio").

### 4.1.1.3.6 INTEREST RATE RISK

The Group's exposure to interest rate variations is divided into two types of risk: the risk of a change in the value of fixed rate financial assets and liabilities, and the risk of a change in flows associated with variable rate financial assets and liabilities.

In order to limit its exposure to interest rate variations, the Group, within the framework of its general policy, sets principles with the objective of limiting the risk of a change in the value of invested assets or the increase in financial charges.

A description is set forth in section 9.9.1.4 ("Interest rate risk management").

#### 4.1.1.3.7 COUNTERPARTY RISK

Counterparty risk is defined as the total loss that the EDF group would sustain in its operating business and on the markets if any of its counterparties defaulted and consequently failed to perform its contractual obligations. These losses can be of various kinds: bankruptcy of a counterparty may lead the Group to record unpaid receivables (settlement risk), to lose contracts that generate profits (opportunity cost), to incur an overcost to replace dishonoured agreements (replacement cost), to have to pay penalties to third parties if the failure of any of the counterparties resulted in the Group's being unable to honour its own obligations, etc.

The Group's entities that have a significant activity on the energy or financial markets (EDF, EDF Energy, EDF Trading, EnBW, Edison) have implemented a method to assign limits to each counterparty according to various criteria (agency ratings, indebtedness, free cash flow, assets, equity) while taking into account the maturity and settlement dates and the nature of the transactions. In addition, as customary on the energy or financial markets, a margin call system has been established by certain entities of the Group in order to reduce or, if possible, eliminate the counterparty risk. Counterparty limits and their use are monitored regularly by such entities and the Group is organized for the proactive monitoring of its major counterparties to determine and update the Group's consolidated exposure to counterparty risk and for the establishment of rules and procedures to manage its consolidated exposures to counterparty risk. The subsidiaries RTE and ERDF, which are also active on energy markets to purchase losses, also apply principles of regular monitoring of their counterparties and of attribution of limits for each counterparty depending on defined criteria.

The Group's counterparty risk management framework, approved by the Board of Directors, applies to EDF and entities under its operational control. This framework provides for an organization to manage and monitor counterparty risk, with reporting procedures. There are three major principles at the core of this framework: (i) the organization's responsiveness, (ii) the independence of the risk control functions from the activities which generate risks and (iii) the responsibility of the entities for the management of their exposures. It also sets a limit for the Group which is applied to each counterparty. In addition to this limit applied to each counterparty, an additional limit for each counterparty has been established in 2007 which is applicable to each entity of EDF or a Group's subsidiary controlled in an operational way.

## 4.1.2 Management of industrial and environmental risks

### 4.1.2.1 MANAGEMENT OF THE NUCLEAR SAFETY RISK BY THE GROUP

The risk factors relating to nuclear safety are described in section 4.2.3 ("Specific risks relating to the Group's nuclear activity") below.

Like other operators, the Group assumes legal responsibility for the nuclear safety of its facilities. Nuclear safety includes all of the technical, organizational and human measures which are intended to prevent accident risks and to limit the effects of an accident, and which are taken at every stage of the life of a nuclear power plant (from design to operation and finally to decommissioning). The methods implemented as part of the nuclear safety regime have allowed continuous performance improvement for the protection of employees against the effects of ionizing radiation. The whole nuclear safety process is permanently controlled, both internally and externally (see below and section 6.2.1.1.3.2 ("Environment, safety and radiation protection")).

The construction of the French nuclear power fleet led to the institution of safety procedures which take into account, from the design stage onwards, the risks which may arise during power plant operation, whether these are associated with the operation of the facilities or to internal and external attack. These procedures rely mainly on the application of strict operating rules and on the Group's integrated skills (nuclear engineering, Research & Development ("R&D")) allowing for an earlier resolution of failures, continuous equipment appraisal, regular re-evaluation of safety margins, technical monitoring and the implementation of new high-performance techniques.

Maintaining and improving safety also relies on the concept of "in-depth defense", which provides for the systematic treatment of the risk of technical, organizational and human failures by interposing successive and independent lines of defense for facilities, process and organization.

The operating quality and safety of EDF's nuclear fleet depends on multiple internal inspections (mainly carried out by the Inspector General for nuclear safety and radiation protection, who reports directly to the Chief Executive Officer of EDF), and external inspections, mainly carried out by the French Nuclear Safety Authority (*Autorité de sûreté nucléaire* "NSA") which became an independent administrative authority as of law n° 2006-686 regarding transparency and safety in the nuclear field dated June 13, 2006. Nuclear power plants must comply with certain specifications whose objectives are established and controlled by the French NSA. The crisis management organization to be implemented in the event of an accident is regularly tested through accident simulation exercises. Each year, approximately 100 exercises are organized for the entire French nuclear fleet. Approximately 10 of these are carried out at a national level. The liability scheme applicable to European operators and the associated insurance are described in section 6.5.4.2 ("Special regulations applicable to nuclear facilities").

### 4.1.2.2 MANAGEMENT OF HYDROPOWER SAFETY RISK

Risk factors relating to hydropower safety are described in section 4.2.2 ("Risks related to the Group's activities") below.

The Group operates hydroelectric facilities under concession agreements or administrative licenses. As operator, it is responsible for their safety.

The main risks associated with these facilities or their operation are the risk of dams or related hydropower facilities bursting, the risks associated with operating the facilities during floods and the risks associated with level variations due to the operation of the facilities.

There are three strategic activities in respect of the management of hydropower safety: the survey of dams and related facilities, the managing of the sites during floods and the managing of flow or level variations (see section 6.2.1.1.4.2 ("Hydropower safety")). In order to further improve the management of these risks, EDF launched in 1995 in France and in the French Overseas departments, quality assurance procedures for these three activities and consequently obtained their ISO 9001 certification by the end of 2003, in each of the Hydropower Operating Divisions. These certifications form the basis of a continuous progress program in hydropower safety

management. They have recently been renewed by the certification authorities. In addition, the detection, analysis of any potential incidents, implementation of corrective and preventive actions, feedback and the sharing of experience are the basis of the improvement process of the safety level of the facilities. Following the process started in 2005 in order to identify default risks for each kind of equipment and after several failures which made some facilities unavailable in the medium term (the Tuillères dam in Dordogne, etc.), EDF decided in 2006 to engage in a 2007-2011 program of technical upgrading and reinforced maintenance of the sites for a total amount of approximately €560 million in order to renew certain facilities, maintain, on a long-term basis, a high level of hydropower safety and preserve, in the future, the technical performances of its fleet. This five-year hydropower facilities renewal program, called "Hydropower Safety and Performance" ("SuperHydro"), is in progress. The program started in 2007 and is progressing as expected (see section 6.2.1.1.4.3 ("Performance of the fleet of hydropower generation facilities")), and during the works period is transitionally entailing more significant programmed unavailabilities than those registered previously.

Actions to make the general public aware of and to brief them on the dangers of hydroelectric facilities, implemented about ten years ago, are renewed each year. The bursting of a dam or of a related facility may have serious consequences for persons and properties located downstream. The monitoring and maintaining of the facilities, which represent the principal measures to prevent the major risk of a dam bursting, are carried out under the control of the DREAL (*Directions Régionales de l'Environnement, de l'Aménagement et du Logement*). The 68 largest dams are covered by a special action plan implemented under the authority of French *préfets*, pursuant to the French law relating to major risks.

EDF has taken out a general civil liability insurance policy in relation to these risks (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power)")).

### 4.1.2.3 MANAGEMENT OF RISKS ASSOCIATED WITH THE GROUP'S TRANSMISSION AND DISTRIBUTION FACILITIES

The risk factors relating to the Group's transmission and distribution facilities are described in section 4.2.2 ("Risks related to the Group's activities").

In relation to transmission and distribution works, the investments made take into account the safety of persons and property.

In addition, in France:

- for third parties, communication actions are directed, among others, at associations of fishermen, and farmers' cooperatives to remind them of the dangers of handling tools in the vicinity of power lines;
- for operators, interventions on transmission or distribution grids are subject to authorizations that include an audit of skills, complemented by site inspections carried out by line managers and the accident prevention expert for the unit in question.

The Group has taken out a general civil liability insurance policy in relation to these risks (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power)")).

### 4.1.2.4 MANAGEMENT OF THE RISKS ASSOCIATED WITH THE GROUP'S INDUSTRIAL ACCIDENTS OR WITH ENVIRONMENTAL OR SANITARY IMPACTS

The Group's activities could, in the absence of adequate management, be the source of industrial accidents or significant environmental and public health impacts.

The risks of adverse effects on the natural environment or on the health of people living locally or on Group and subcontractors' personnel are governed by rules relating to the environment and public health which are increasingly restrictive. The corresponding risk factors are described in section 4.2.2 ("Risks related to the Group's activities") below.

The Group's environmental policy incorporates developments on major environmental issues such as fighting climate change, adverse effects on biodiversity, etc.

The operational implementation of this policy is based on the deployment of an Environmental Management System in all of the Group's entities that have a direct or indirect environmental effect. The implementation of this Environmental Management System guarantees improved control of knowledge and compliance with regulations and anticipates changes to the regulations. This system received ISO 14001 certification in April 2002 (see section 6.4.3 ("Sustainable Development policy and public service"). In relation to industrial accidents, the ISO 14001 standard involves taking a controlled set of systematic and planned actions, in particular, in relation to the prevention of major risks, emergency situation tests and safety management. Accordingly, the Group has taken out a general civil liability insurance policy (see section 4.1.3.1 ("Civil liability insurance (not including civil responsibility for nuclear power)")).

Each year, follow-up audits are carried out by an authorized external entity in the entities of the EDF group within the scope of the certification. In 2008, the renewal audit confirmed the grant, for a period of three years, of the ISO 14001 certificate for the Environmental Management System implemented by the Group.

## 4.1.3 Insurance

To limit the consequences of certain events on its financial situation, the EDF group has taken out insurance aimed at covering its principal risks of damage to property and civil liability and personal insurance. Its nuclear power risks are covered by a special civil liability scheme as set forth below.

Insurance management is led by the Group's Insurance Division, whose task is to propose and continuously optimize the policy of managing risks that are transferable to the insurance and alternative markets. Once the Group's policy has been set and approved by EDF's Board of Directors, the Group's Insurance Division organizes its implementation through EDF Assurances, an insurance brokering subsidiary within the EDF group, and with major operators in the insurance and reinsurance markets.

The exchange of information between the Corporate Risk Management Division (see section 4.1.1 ("General framework for managing and controlling the Group's risks") above) and the Group's Insurance Division has been standardized so that both divisions benefit from a consolidated view, and one that is as comprehensive as possible, of the Group's risks. Starting from this shared vision, the Group can search for coverage that is matched to its insurable risks and that is consistent with the principles set forth in the Group's insurance policy.

EDF has decided to set up Group insurance policies largely extended to its subsidiaries that are controlled by EDF and its regulated networks subsdiaries having a managerial autonomy (RTE and ERDF) so as first to unify risk coverage and rationalize their management and, second, to control the corresponding costs of insurance. For the damage risk, EDF is a member of the mutual fund Oil Insurance Limited ("OIL") so as to respond to the risks of damage (other than to aerial systems) to the Group's own property or to property under concession (EDF and its consolidated subsidiaries in the US GAAP meaning), in particular nuclear plants (other than nuclear accidents), fossil-fired power plants, hydropower structures, network transformers. OIL is a mutual insurance fund that is specific to the needs of the energy sector and which offers its members limited coverage for physical damage. Besides this basic coverage, EDF has set up additional insurance coverage for EDF and many of its French and international subsidiaries.

EDF Assurances carries out regular inspections of insured sites in partnership with the operational divisions of EDF and its controlled subsidiaries in France and abroad and the principal insurers. These inspections allow any risks associated with the Group's business to be identified and evaluated so as to reconcile the insurance coverage constantly with these risks.

The total insurance premiums for EDF and Group policies managed by EDF Assurances, including all types of coverage was €96.3 million in 2009, including €61.1 million expended by EDF.

EDF considers that the policies subscribed in accordance with the Group's insurance policy are consistent with the offer capabilities of the insurance market for operators of similar size in similar businesses worldwide, in particular, in relation to limits of coverage and deductibles. The nature and coverage of insurance may be altered at any time, depending on market conditions, on insurance policy rollout rates and on the assessment by EDF's Board of Directors of the risks and the adequacy of their coverage.

Insurance policies, in accordance with market practice, include exclusions, limits and/or lower limits.

### 4.1.3.1 CIVIL LIABILITY INSURANCE (NOT INCLUDING CIVIL RESPONSIBILITY FOR NUCLEAR POWER)

#### SCOPE: EDF, RTE, ERDF, AND EDF'S CONTROLLED SUBSIDIARIES

EDF has taken out a general civil liability policy covering it against the financial consequences of civil liability (excluding nuclear damage) which may be incurred during its business as a result of damage caused to third parties. In particular, this covers the risk of civil liability associated with a hydropower dam bursting, fossil-fired power plants, transformers, and other network equipment, together with those related to subsequent damage to the environment, for example by solid, liquid or gaseous waste.

These guarantees are purchased within the means available at acceptable prices on the insurance and reinsurance markets. The maximum coverage has been €1 billion. Pursuant to this policy, the share of risk kept by the Group, including the share of Wagram Insurance Company Ltd. (an Irish insurance company wholly-owned by EDF), does not exceed €5 million per incident, although subsidiaries generally choose lower deductibles, better adapt to their financial capacities.

### 4.1.3.2 CIVIL LIABILITY INSURANCE FOR DIRECTORS AND CHIEF EXECUTIVE OFFICERS

#### SCOPE: DIRECTORS AND CHIEF EXECUTIVE OFFICERS OF EDF, RTE, ERDF, AND EDF'S CONTROLLED SUBSIDIARIES

EDF entered into a "Civil liability for Directors and Chief Executive Officers" insurance program covering them against monetary disbursements resulting from liability arising in connection with their duties as directors and officers.

### 4.1.3.3 DAMAGE INSURANCE (NOT INCLUDING NUCLEAR ASSETS)

#### 4.1.3.3.1 CONVENTIONAL DAMAGE POLICY

#### SCOPE: EDF, ERDF, EDF ENERGY, AS WELL AS MANY OTHER SUBSIDIARIES

Wagram Insurance Company Ltd., and insurers and reinsurers, provide extensions of coverage (additional coverage for damage to property up to a maximum of €1 billion) in addition to the OIL coverage. For this "Conventional damage" policy, the Group's retention on a claim (including the deductible, depending on the subsidiaries, and the share of the risk covered by Wagram Insurance Company Ltd.) does not exceed €20 million.

This policy includes coverage for "Operating losses" in the event of property damage for most of the subsidiaries, but not for EDF itself. The measures taken to prevent industrial and environmental risks and to limit their effects are described in section 4.1.2 ("Management of industrial and environmental risks").

This "Damage" policy will be gradually extended to other subsidiaries controlled by EDF.

RTE subscribes to a "Contractual damage" program specific to its own property (transformers, buildings and technical facilities).

#### 4.1.3.3.2 "CONSTRUCTION" RISK COVER

EDF subscribes to policies covering specific worksite risks (worksite all-risks/construction all-risks). These policies are not part of a Group program but are subscribed to on a case by case basis for major worksites, such as the Flamanville EPR, the construction of combined cycle power plants, dams, combustion turbines, etc.

#### 4.1.3.3.3 STORM COVER

#### SCOPE: AERIAL DISTRIBUTION NETWORK OF ERDF AND INSULAR ENERGY SYSTEMS

The modalities of implementation of damage cover for ERDF's aerial distribution network and Insular Energy Systems remain subject to study.

### 4.1.3.4 SPECIAL INSURANCE FOR NUCLEAR FACILITY OPERATIONS

#### 4.1.3.4.1 CIVIL LIABILITY

EDF's insurance policies have been taken out in accordance with the French law n° 68-943 of October 31, 1968, as amended by the French law n° 90-488 of June 16, 1990, which interpreted the obligations, in terms of

the civil liability of nuclear facility operators, resulting from the Paris Convention (see section 6.5.4.2 ("Special regulations applicable to nuclear facilities")). Accordingly, in order to guarantee the availability of the funds required as a result of such obligations, EDF opted to take out insurance policies with AGF and European Liability Insurance for the Nuclear Industry (ELINI). The amounts covered by such policies conform to the limits of liability set in the event of an incident as stipulated by the regulation, at a nuclear facility as well as during transportation. For incidents on site, the total amount covered is €91.5 million per nuclear incident, such limit being available on a maximum of two occasions on each site over a three-year period. According to applicable regulation, insurance contracts subscribed by EDF to cover the risk of nuclear liability provide no deductible. However, the company Oceane Re (a Reinsurance company of the Group) who participates in this risk through reinsurance contracts issued to AGF and ELINI, retains an exposure lower than €10 million per incident.

A special insurance covers nuclear civil liability following incidents during transportation. The limit of coverage depends on the regulations of the country (or countries) crossed during the journey; for accidents during transportation through France, the total amount covered is €23 million.

As of the implementation of the provisions of law n° 2006-686 of June 13, 2006 regarding transparency and safety in the nuclear field (see section 6.5.4.2 ("Special regulations applicable to nuclear facilities")), EDF will have to adjust its insurance coverage so as to comply with the new guaranteed compensation cap (€700 million for what concerns the liability of a nuclear facility's operator). To this end, EDF will seek, under this new legislative framework, possible coverage solutions (nuclear pools, mutual funds, etc.). These provisions will not be applicable until two-thirds of the signatory states have ratified the Protocols amending the Paris and Brussels Conventions regarding civil liability in the nuclear field and for nuclear damages.

British Energy operates nuclear power plants in the United Kingdom. In this country, the liability regime for nuclear facility operators is comparable to the French regime and British Energy is insured with the English nuclear risks insurance pool (NRI – Nuclear Risks Insurers Limited) for up to £140 million, which represents the current civil responsibility limit for nuclear operators in the United Kingdom, with extended cover for incident management costs of up to £80 million.

EnBW operates nuclear power plants in Germany. In this country, the nuclear facility operator's liability is strict and unlimited. Under the law relating to nuclear energy, operators of nuclear power plants must put in place a financial guarantee in the amount of €2.5 billion per incident. EnBW has thus taken out a nuclear civil liability insurance covering up to €255.6 million, and entered into a "solidarity" contract with other parent companies of German nuclear installation operators (E.ON, RWE and Vattenfall Europe) providing for coverage of the remaining €2,244.4 million. This contract stipulates that in the event of an incident, and once the relevant nuclear operator and its German parent company have exhausted their own resources, the other companies will contribute to enable the operator to satisfy its obligations.

For more information on the regulations governing the nuclear operator's civil liability, see section 6.5.4.2 ("Special regulations applicable to nuclear facilities") below.

#### 4.1.3.4.2 DAMAGE INSURANCE FOR NUCLEAR FACILITIES

In addition to the coverage due to EDF's participation in the OIL mutual fund, property damage related to EDF's nuclear facilities in France (including following a nuclear accident) and to British Energy's nuclear facilities in the United Kingdom, as well as nuclear decontamination costs are covered by a joint insurance policy which requires the intervention of the NRI English pool, insurers, some of which are reinsured by the French nuclear pool (Assuratome) and of the European Mutual Association for Nuclear Insurance (EMANI), for a total capacity of €1,750 million above an amount of $270 million.

EnBW enjoys, with lower limits and deductible, a similar coverage to that of EDF thanks to the EMANI mutual fund and to the German pool.

### 4.1.4 Crisis management

The EDF group has a crisis management policy the implementation of which enables it to manage situations in which its property, activity, personnel or image is threatened by a foreseen or unforeseen event.

In this context, the EDF group ensures that it always has the means available to respond to a crisis. An alert mechanism is in place to alert the general Management to any event potentially justifying a decision to make the transition to a Group crisis situation.

The implementation of crisis organization is based on the crisis plans that are designed by the divisions or entities concerned, and specific according to the type of crisis (imbalance between generation and consumption, information systems incident, malice, health crisis, technical incident at a generation facility, social crisis, etc.), in the framework of coherence fixed by the Group crisis organization.

In each entity, crisis management training has been put into place and organization measures are tested in the context of crisis drills. A program of crisis drills at Group level is established each year and approved by EDF's General Management (an average of 3 or 4 crisis drills per year involving the Group crisis unit), in addition to the crisis drills organized by the entities (for example, approximately 10 drills per year for nuclear power).

## 4.2 Risk factors

The Group operates in an environment that is experiencing profound change, generating various risks, some of which are outside of its control and which are in addition to the risks inherent in carrying on its businesses. The risks that the Group believes are material for its businesses are described below. One or several of these risks could possibly have an adverse effect on the Group's activities and/or its results. Moreover, other risks, of which it is currently unaware, or which it believes are not material at present, may have the same adverse effect.

In particular, the Group faces legal risks from all of its activites and its various markets. The legal risks linked notably to the regulatory framework, operational activities, partnerships created and contracts concluded with clients and suppliers are particularly mentioned in sections 4.2 ("Risk factors") and 4.3 ("Dependency factors") hereinafter. The principal litigation, procedures and arbitration in which the Group is involved are described in section 20.5 ("Legal and arbitration proceedings").

The risks identified below relate to:

- European energy markets;
- the Group's activities;
- the Group's nuclear activities;
- the Group's structure and its transformation; and
- the structure of EDF share capital and the listing of its shares.

## 4.2.1 Risks related to the European energy markets

**The Group must face increased competition on the European energy markets, in particular, on the French electricity supply market, which is its principal market.**

In France, since July 1, 2007, the electricity market has been totally open to competition. All of EDF's clients now have the option of choosing their electricity supplier and can therefore choose any of its competitors (see section 6.2.1.2 ("Sales and marketing")). EDF has implemented measures aimed at contending with competition. Due to the changing context of the competition (new regulation, emergence of new players, mergers of existing operators, etc.), EDF may lose a share of the market. This loss of market share could have, at constant consumption and price levels, a negative impact on the Group's sales. Finally, to achieve its objectives, EDF could be forced to increase its marketing expenditures or reduce its margins (especially in the event of price competition), which would have a negative effect on its profitability.

Elsewhere in Europe, the Group faces different contexts according to the competitive situations (more or less total opening of markets, position of competitors, regulations, etc.).

In some countries, or in some regions within a country, the Group must therefore pursue a defensive strategy with respect to its market share, as in France. In other countries, in contrast, it must pursue an offensive strategy to conquer market share. The type of competition, the development of this competition, and its effect on the Group's activities and its results vary from one country to another. They depend on the degree of deregulation in the country in question and on various other factors over which the Group has no control.

Within this context, even if the Group considers that the European electricity market presents opportunities, the Group may not be able to defend its market share or win expected market shares, or may see its margins decrease, which would have a negative effect on its activities, its strategy and its financial results.

**The legal and regulatory framework governing the liberalization of the energy sector is recent. This framework may change in the future and become more restrictive.**

The Group's activities in France and abroad are subject to numerous regulations (see section 6.5 ("Legislative and regulatory environment")). Moreover, and even in the European Union, where directives only define a general framework, laws and regulations may vary from one country to another.

This legal and regulatory framework, which organizes the opening up of the energy sector, is relatively recent and does not necessarily provide all of the solutions to the difficulties raised by the opening up of those markets. It is therefore likely to change, which could be unfavorable to the Group. For instance, future changes to the legal and regulatory framework, whether in France or abroad, may lead to additional costs, be inconsistent with the Group's development model, or change the competitive context in which the Group operates.

In particular, in the UK, the regulation regarding electricity generators' access to the main UK transportation and transmission network (GB transmission system) is currently under review. There is a risk that this review may fundamentally change the basis for charging and the physical access arrangements. This may result in higher costs for existing generation assets and may also undermine the profitability of any new nuclear stations.

**Risks associated with the fact that the Group will remain, in all likelihood for the coming years, a major operator in the French electricity market.**

In France, although it has observed a decrease in its market share, EDF will in all likelihood remain the largest operator in the French electricity market over the next few years, particularly in generation and supply. The transmission and distribution activities (operated by RTE and by ERDF) are required to be operated in a framework guaranteeing their independence from generation and supply activities in order to ensure non-discriminatory access to all users.

EDF intends to continue to strictly comply with current regulations on competition and non-discrimination.

However, competitors have and may initiate lawsuits for non-compliance with these regulations, which may be decided against the Group's interests.

Furthermore, regardless of any legal action initiated by competitors, the authorities may make decisions that are contrary to the Group's economic or financial interests or to its model as an integrated and balanced operator (see, in particular, section 6.5.1.1 ("European legislation" – "Investigations Concerning the Energy Sector") and section 20.5.1 ("Legal proceedings concerning EDF")).

In April 2009, the "Champsaur Commission" issued a certain number of proposals aiming to promote a more competitive French electricity market in France, both upstream and downstream (see sections 6.2.1.2.1.2 ("The competition") and 6.5.4.5.2 ("Future regulations in France")). One of the Champsaur Commission's proposals is *"to grant access rights to baseload electricity to each supplier at a regulated price reflecting the economic conditions of the established nuclear fleet for a volume proportional to its national client portfolio."* The Government announced the adoption by the end of the year of a law, provisions of which are not known as of the date hereof, aiming to implement, on this basis, a new organization of the electricity market in France. A bill to that effect was handed down to the French Council of State at the end of March 2010.

Finally, European countries may claim that the opening up of the French market is insufficient and implement measures intended to slow the Group's growth in their own countries.

This may have material, negative consequences for the Group's model, activities and financial results.

**Laws and regulations that require the transmission and distribution activities to be managed independently limit control over these activities.**

In accordance with current laws and regulations, EDF has instituted a management of its distribution network that is independent from its generation and sales activities and has transferred its distribution and transmission network activities to wholly-owned subsidiaries. EDF may be affected by the

loss of control over certain operational decisions, which may have an impact on its operating costs, which is a significant element in the profitability of its transmission and distribution activities in France. At the same time, EDF will continue to bear the risks associated with transmission and distribution activities, potential liabilities to third parties and factors that may affect the profitability of transmission and distribution assets.

Such risks may also be present in countries where the Group owns or operates transmission or distribution networks where it is subject to similar regulatory restrictions.

## 4.2.2 Risks related to the Group's activities

**The Group operates facilities that may cause significant harm to the natural or human environment or for which accidents or external attacks may have serious consequences.**

The risks specific to nuclear facilities are described separately below in section 4.2.3 ("Specific risks relating to the Group's nuclear activity").

With respect to hydropower facilities, even if it is not the owner but a licensee, the Group is responsible as the operator for the safety of the facilities. The main risks associated with hydropower facilities and their operations are the risk of dams or associated hydropower facilities bursting, risks associated with operating the facilities during floods, and the risk associated with flow or level variations due to the operation of these facilities. To these risks are added those associated with attacks or ill-intentioned acts of any kind.

The Group takes, during the construction and operation of hydroelectric facilities, measures for accident prevention and safety (see section 6.2.1.1.4.2 ("Hydropower safety")) with the collaboration of public authorities. Nonetheless, the Group cannot guarantee that such events will never occur or that the measures taken will be fully effective in all cases, in particular, to deal with external events (floods, negligence or ill-intentioned acts of third parties).

Regarding electricity transmission and distribution facilities, persons working in or near this type of facility may be exposed, in the event of an accident, error or negligence, to the risk of electrocution. In this field, the Group also implements accident prevention and safety measures. However, the Group cannot guarantee that these measures will prove sufficient in all cases.

Questions with respect to the risks to human health as a result of exposure to electromagnetic fields ("*Champs Électromagnétiques*", or "CEM"), in particular, from power lines operated by the Group, are being raised both in France and abroad. Based on numerous studies completed over the past 20 years, numerous international health organizations (including the World Health Organization ("WHO"), the International Agency for Research on Cancer ("IARC"), the American Academy of Sciences, the American National Institute of Environmental Health Sciences, the English National Radiation Protection Board) consider, given currently available scientific information, that the existence of health risks as a result of exposure to CEM has not been proven. Since 2002, the IARC has classified the low-frequency electromagnetic fields at level 2B (possible carcinogen) on its scale of scientific evidence. However, the WHO considered in a report published in June 2007 that the health risks, if any, are low.

Medical knowledge about health risks related to exposure to electromagnetic fields may evolve or public sensitivity about such risks could increase, or the principle of precaution could be applied very broadly.

At a European Union and French level, new regulations are being prepared aiming in particular at tackling the risks linked to CEMs (see section 6.5.4.5 ("Principal draft regulations likely to have an impact on the EDF group's business")).

All of the above could expose the Group to risks of increased litigation or lead to the adoption of more stringent security measures for the operation or construction of transmission or distribution networks.

Finally, and more generally, the Group operates or has operated facilities which, as currently operated, could be or have been the source of industrial accidents or environmental and public health impacts (such as inadequately controlled emissions, leakages in electricity supply lines insulated with oil under pressure, a failure of decontamination facilities, pathogenic micro organism, asbestos, polychlorobiphenyls ("PCBs"), etc.). In particular, large quantities of hazardous materials (mainly explosive or inflammable, such as gas and fuel oil) are stored in certain facilities. These facilities may be located in industrial areas where other activities experiencing similar risks are operated, such that the Group's own facilities may be impacted by accidents occurring at neighboring facilities owned by other operators and not subject to the Group's control.

The Group implements in the framework of standards ISO 14001 (see section 4.1.2.4. ("Management of the risks associated with the Group's industrial accidents or with environment or sanitary impacts")) measures both for accident prevention and repairs with respect to industrial accidents or harm to the environment caused by the facilities that it operates. These measures are intended, in particular, to protect the Group both against the risk of an accident (such as explosion, fire, etc.) occurring in its own facilities and against the impact of such an accident occurring in a neighboring facility owned by a third party.

Generally, the Group cannot guarantee that the measures taken for the control of these risks will prove fully effective upon the occurrence of one of the events referred to above.

An accident of the type described in the preceding paragraphs would have serious consequences for persons, properties and business continuity, and the Group could be found liable. The civil liability and damage insurance coverage taken out by the Group may prove to be significantly inadequate. Further, the Group cannot guarantee that it will always maintain a level of coverage at least equal to that currently in place and at a cost that would not be higher.

Furthermore, such accidents may lead to the shutdown of the facility in question and, potentially, of similar facilities that may be considered to present the same risks.

In addition, facilities operated by the Group may be targeted by external attacks or ill-intentioned acts of any nature. Safety measures were provided for during the design of the facilities and sites and protective measures were implemented by EDF. Moreover, safety measures to counter all forms of attack were implemented in collaboration with the public authorities. Nonetheless, like any safety measures intended to counter an outside threat, the Group cannot guarantee that these will prove fully effective in all cases, including upon the occurrence of one of the events mentioned above. Nor can the Group guarantee that European and national legislation regarding the protection of sensitive sites and critical infrastructure will not become more restrictive, which could generate additional investments or costs for the Group.

An attack or ill-intentioned act committed on these facilities could have similar consequences to those of any of the accidents described above: (i) damage to persons and property, (ii) the Group's liability being sought on the basis of measures that are judged inadequate, or (iii) interruption to operations.

Any one of these events may have material, negative consequences on the Group's image, activities, results and financial situation.

**A significant part of the Group's revenue is generated from activities subject to regulated tariffs, the level of which may have an impact on the Group's results.**

In France, a significant part of EDF's revenue depends on regulated tariffs. Such tariffs are set by joint order decree of the Minister of Economy and the Minister in charge of Energy, either upon proposal by or after consultation with the French Energy Regulation Commission (*Commission de Régulation de l'Énergie*, or "CRE") (the integrated tariff and the TURPE, see section 6.2.2.4 ("Tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")")). Tariffs are also set with regulatory authorities' intervention in other countries where the Group operates, including in the United Kingdom, Italy, Germany, China, Belgium, Hungary and Slovakia.

Public authorities and the regulator may decide to limit or even block tariff increases, with no change to the quality of service. These authorities can also change the requirements to benefit from such regulated tariffs (with respect to France, see section 6.5.1.2 ("French legislation") relating to law n° 2006-1537 dated December 7, 2006 concerning the energy sector).

The provisions of the law of December 7, 2006 provided in particular for the implementation until June 30, 2010 of a regulated tariff, the transitory regulated tariff for market adjustment ("TaRTAM") for the final customers who applied in writing to their supplier before July 1, 2007 (see section 6.2.1.2.1.5 ("TaRTAM contracts")).

In addition, in April 2009, the "Champsaur Commission" issued a certain number of proposals aiming to promote a more competitive electricity market in France, both upstream and downstream (see sections 6.2.1.2.1.2 ("The competition") and 6.5.4.5.2 ("Future regulations in France")). In line with this report, the Government has begun drafting a bill that was handed down to the French Council of State in late March, for final adoption by the Parliament announced by the end of the year 2010.

The Group cannot guarantee that the laws and regulations relating to the implementation of these provisions allowing a return to regulated price will not be extended again, or that no other tariff plans will be introduced at their term. The Group can neither guarantee that the regulated tariffs will always be set at a level which would allow it to preserve its short- medium- and long-term investment capacity and its property interests, while ensuring a fair return on the capital invested by the Group in its generation, transmission and supply assets.

**EDF is responsible for certain commitments, in particular public service commitments, paid for by mechanisms which could fail to provide complete compensation of excess charges incurred in relation to these commitments, or which could be questioned.**

The Public service contract entered into by the French State and by EDF on October 24, 2005 outlines the public service commitments that EDF must provide and sets out compensation mechanisms in respect of EDF as regards these commitments (see section 6.4.3.4 ("Public service in France")).

EDF cannot ensure that the compensation mechanisms provided for by the laws and regulations applicable to it regarding its public service commitments and the implementation of regulated tariffs will provide for full compensation of the costs incurred in order to respect such commitments and/or implement such tariffs. EDF cannot guarantee either that these compensation mechanisms will not be called into question or that existing mechanisms could fully cover potential additional costs to be incurred in relation with new obligations of EDF under its public service commitments.

If any of these events should occur, it may have a negative impact on EDF's activities and its financial results.

**The Group's activities require various administrative authorizations that may be difficult to obtain or whose grant may be subject to conditions that may become significantly more stringent; furthermore, some activities are subject to special taxation.**

The operations and development of the Group's industrial activities – generation, transmission and distribution – require various administrative authorizations, at local and national levels, in France and abroad. The procedures for obtaining and renewing these authorizations can be drawn-out and complex. Obtaining these authorizations is not routine and the conditions attached to obtaining them may change and are not always predictable. The EDF group may accordingly be required to pay significant amounts to comply with the requirements associated with obtaining or renewing these authorizations (for example, costs of preparing the application for the authorizations or investments associated with installing equipment required before the authorization can be issued). Its industrial activities may also be penalized. Delays, extremely high costs or the suspension of its industrial activities due to its inability to obtain, maintain, or renew authorizations, may have a negative impact on the Group's activities and profitability. In addition the Group may also have invested resources without obtaining the necessary permits and authorizations and therefore have to cancel or withdraw from a project, which may have a negative impact on its business or development.

Some of the Group's activities, for example, its nuclear, fossil fuel and hydropower generation activities in France, are subject to special taxation, which could increase. That would have a negative impact on the Group's financial results.

**In some cases, the Group operates its generation, transmission or distribution activities within the context of public service concessions and it is not always the owner of the assets it operates.**

The Group does not always own the assets that it uses for its activities and in such case, frequently operates them under a concession of public service.

Accordingly, in France, ERDF does not own all the assets of the distribution networks but operates them under concession agreements negotiated with local authorities (see section 6.2.2.2.3 ("Concessions")). Pursuant to the French law of April 8, 1946 and the French law of February 10, 2000, only EDF can be appointed by local authorities to operate their distribution networks, except networks operated by local distribution companies ("LDCs"). Therefore, when renewing a concession agreement, ERDF does not compete with other operators. Nonetheless, the Group cannot guarantee that such provisions will not be modified by law in the future or will not be challenged before the Court of Justice of the European Communities (renamed Court of Justice of the European Union since the implementation of the Lisbon Treaty on December 1, 2009) or viewed to be in violation of European law. In addition, the Group could not obtain the renewal of these contracts at the same economic terms (see in particular section 6.2.2.2.3 ("Concessions")).

In France, RTE is both owner and operator of the public transmission system according to standard concession specifications signed by the Minister of Industry (decree n° 2006-1731 of December 23, 2006) (see section 6.2.2.1 ("Transmission – RTE") and section 6.5.2.2 ("French legislation")).

Hydropower generation facilities of 4.5 MW or more are also operated under concessions awarded by the French State. Renewal of these concessions at their expiry dates is now subject to a procedure of invitations to tender (see section 6.2.1.1.4.4 ("Current and future hydropower generation issues")). In addition, the law on water dated December 30, 2006 eliminated the preferential right of the outgoing licensee at the time of renewal and the decree n° 2008-1009 dated September 26, 2008 provides the conditions under which the concessions may be renewed. If an expired concession

is not renewed, the outgoing licensee will not, under current rules, benefit from any indemnity. The rectifying 2006 Finance Act nonetheless provides for reimbursement of non-amortized expenditure incurred for modernization work or those for increasing production capacities if this work has been carried out during the second half of the concession.

Besides, the Government retained the principle of bringing forward the expiry of certain concessions, in order to carry out grouping by valley. The concessions the expiry of which is brought forward by Government must be compensated by the Government, in order to compensate for the loss in revenue for the outgoing licensee resulting from the early termination of operation of the concession, in accordance with the terms of the concession. The hydropower concessions, at the time of their renewal, are subject to an annual charge indexed according to the revenue from sales of electricity produced by the conceded hydropower structures, paid to the French State and allocated in part to the *départements* on the territory of which the water courses used flow. The Grenelle 1 law of August 2009 provided that the amount of this charge may be derestricted above 25%, threshold set by the amended Finance Act for 2006. The Grenelle 2 draft law, at the date of this *Document de Référence*, provides for a limit set on a case by case basis by the conceding authority, within each competitive situation. In the state of the draft law, a part of this charge would also be allocated to municipalities.

The EDF group cannot guarantee that it will obtain the renewal in its favor of each of the concessions that it currently operates, or that renewal of a concession will be obtained under the same economic terms as the initial concession. The Group cannot guarantee either that the compensation paid by the Government in the case of early termination of the operation of a concession will be able to fully compensate for the Group's consequent loss of revenue, or that future regulations regarding the limitation of charges will not develop in a way that could negatively affect the Group.

This could have a negative impact on its activities and financial results.

The Group also operates under electricity distribution or generation concessions in other countries where it is present (including in the United Kingdom, Germany and Italy).

Depending on the conditions in each of these countries, the transmission, distribution or generation concessions may not be upheld or be renewed in its favor, with changes in the economic conditions in the concession specifications, which would have a negative impact on the Group's activities and its financial results.

**The Group must comply with increasingly restrictive environmental and public health regulations that are the sources of costs and potential liabilities.**

The Group's activities are subject to regulations for the protection of the environment and public health, which are increasingly numerous and restrictive. These regulations relate to the Group's industrial activities, energies generation, transmission and distribution, as well as to energy supply and energy-related services, which must, for example, incorporate the concept of demand-side management in their offers (for a description of environmental, health and safety regulations applicable to the Group, and future regulations likely to have an impact on its activity, see section 6.5.4.4 ("Other regulations relating to the environment, health, hygiene and safety")).

Failure to follow these regulations could entail additional costs and/or expose the Group to significant legal actions.

The Group may be found liable, even if it has not committed any fault or breached existing rules. The Group may also be found liable as a result of the fault or breach committed by entities which were not part of the EDF group at the time of damage, if the Group has since taken over their facilities.

Furthermore, these regulations could be subject to significant reinforcement by the national or European authorities (see section 6.5.4.5 ("Principal draft regulations likely to have an impact on the EDF group business")), which would have a negative impact on the Group's activity and financial results.

Current rules, and future changes to such rules, have resulted and are likely to continue to result in an increasing level of operating expenses and investments in order to comply with such rules. The Group may even be required to close facilities that could not be made compliant with new rules. Furthermore, other rules, which may be more restrictive or which may apply to new areas (in particular provisions which could be adopted in the case of Grenelle 2 law), and which are not currently foreseeable, may be adopted by the relevant authorities and have a similar effect.

In addition, external perception by stakeholders of the Group's policy on sustainable development could worsen, resulting in a deterioration of the Group's image and extra-financial rating.

**The growth of an integrated European electricity market may be slowed by a lack of cross-border transmission system interconnections.**

As described in section 6.3.1 ("Europe"), the growth of an integrated European electricity market is inhibited by a lack of cross-border interconnections. This situation limits exchange capacity between operators in different countries, notably the capacity to rapidly adapt the supply to the demand ("blackout risk"), and allows price differences between the different countries, which would be significanlty reduced in an efficient integrated European market, to exist. It also impedes the emergence of efficient operators with a European dimension as it limits the options for synergies between companies within a same group located on different sides of a border.

Although there are currently several projects to develop interconnections, their construction has nonetheless been slowed down, mainly by environmental, financial, regulatory and local acceptability considerations.

Beyond the absence of adequate interconnections between countries where the Group is based or their too slow development may limit industrial synergies which the Group intends to achieve between its various entities or cause network interruptions in countries in which the Group is established, which could have a negative impact on its results, its business and outlook.

**Repeated and/or widespread blackouts in France or in an area served by a Group subsidiary, in particular, if they are attributable to the Group, may have consequences for its activities, results and image.**

The Group could be the source of repeated blackouts, or widespread blackouts or be involved in one, even if the causal event occurred in another network or was attributable to another player.

The causes of these electricity breakdowns vary: local or regional imbalance between electricity generation and consumption, accidental interruption to the power supply, cascaded interruptions (more difficult to overcome in a market with cross-border exchanges), interconnection problems at borders, lack of investment and difficulty in coordinating operators on an open market.

Such electricity supply breakdowns would first have an impact on the Group's sales. They may also result in repair costs for reconnecting or rehabilitating the network and lead to investment expenditures if it were decided, for example, to install additional generation or network capacity. Finally, they would have a negative impact on the Group's image with its customers, in particular, if the blackouts proved to be attributable to it.

**Natural disasters, significant climatic changes, or any major event on a scale that is difficult to predict, could have a material negative impact on the Group's industrial and commercial activities.**

In France, the storms of December 1999 and the heat wave in the summer of 2003 and more recently the Klaus storm which crossed South-West of France on January 24, 2009 and the Xynthia storm at the end of February 2010, led to additional costs for the EDF group. In addition to these events, other natural disasters (floods, landslides, earthquakes, etc.), other significant climatic changes (droughts, etc.), or any other event on a scale that is difficult to predict (large epidemic diseases, etc.) could affect the Group's activities.

Based on its experience with the above events, the EDF group implements measures, that are aimed at allowing it to limit the consequences should such events be repeated. Accordingly, following the storms of December 1999, the Group initiated a program to secure its transmission and distribution networks.

Following the analysis carried out in the first quarter of 2009, with respect to the consequences of the storm of January 24, 2009, an adaptation of this program is being processed. Following the heat wave in the summer of 2003, EDF drew up an "Unforeseen Climatic Events" plan in order to better anticipate and prevent the consequences of such situations (as it was the case for the heat wave of summer 2006). The adoption of such measures can lead to costs in addition to those related to the cost of repairing the damage caused by the natural disaster and the loss of earnings corresponding to the interruption to supply.

The Group's aerial networks, including those owned by RTE, are not covered for "damage to property". The specific coverage set up by the Group after the storms of December 1999 against storm risk for the portion of its aerial networks related to its distribution network (see section 4.1.3.3.3 ("Storm cover")) has expired in December 2008; as a result, the Group is currently considering alternative schemes. Owing to the absence of coverage, any damage to these aerial networks could have a negative impact on the Group's financial situation.

Finally, in the event of a wide-spread sanitary epidemic, EDF created and tested, in 2006, a plan which aims to assure the continuity of electricity supply, depending on the intensity of the crisis, and at the same time guarantee the safety of the facilities and reduce the sanitary risks to which employees are exposed. In November 2008, this plan was submitted to a second crisis exercise with the contribution of the Asia Pacific Division of EDF and EDF Energy. Organization measures such as those described in the plan have been activated between May 2009 and February 2010 in order to cope with the H1N1 epidemic that has affected virtually every country in which the Group is present. The measures provided for in the Group's Pandemic plan, initially defined in the context of an H5N1-type epidemic, have been adapted in the context of the H1N1 epidemic.

The Group cannot guarantee however that the occurrence of a natural disaster, a significant climatic unforeseen event, or any other event on a scale that is difficult to predict will not have significant negative consequences on its activities, its profits and its financial situation.

**Risks associated with climatic conditions and seasonal variations in the business.**

Electricity consumption has a seasonal nature, and depends namely on climatic conditions. Accordingly, electricity consumption is generally higher during winter months. In addition, available generated electricity may also depend on climatic conditions: for example, low hydrolicity, or heat waves which inhibit generation due to the obligation to respect certain temperature limits for rivers in the downstream of the facilities.

The Group's profits consequently reflect the seasonal character of the demand for electricity and may be adversely affected by significant climate variations since the Group could have to compensate the reduction in the availability of economical generation means by using other means with a higher generation cost or by being required to access the wholesale markets at high prices.

**The Group's activities are sensitive to economic cycles and to general economic conditions.**

The Group's activities are sensitive to economic cycles and to general economic conditions within the geographical areas in which the Group operates. Any economic slowdown, in such areas, would lead to a drop in energy consumption, investments and industrial production by the Group's customers, and, consequently, would have a negative effect on the demand for electricity and the other services offered by the Group, which could have a significant adverse effect on the Group's activities, profits and outlook, as well as on the implementation of its development strategy.

The Group cannot guarantee that the economic downturn effects, as the one observed since October 2008, in the geographical areas in which it operates, will not have a significant adverse impact on its activities, operating profits, financial situation or outlook.

**Technological choices implemented by the Group may be outperformed by more efficient technologies.**

The Group's activities are based on a certain number of technological choices, which may be outperformed by other technologies that prove more efficient, more profitable or even more reliable than those used by the Group. The use of these technologies by the Group's competitors could have the effect of reducing or eliminating the competitive advantage that the Group has through some of its technologies, and thus have a negative impact on its activities, financial results and outlook.

**The occurrence of work-related illnesses or accidents cannot be excluded.**

Although the Group does its best to comply with the laws and regulations concerning health and safety in the different countries in which it operates, and considers to have taken measures intended to ensure the health and safety of its employees and those of its subcontractors, the risk of work-related illnesses or accidents cannot be excluded. The occurrence of such events may lead to lawsuits against the Group and the payment of damages, which may prove material.

For a description of the measures taken by the Group with regards to ionizing radiation, see section 6.2.1.1.3.2 ("Environment, safety and radiation protection").

Regarding asbestos, the Group has taken measures to treat materials containing asbestos, provide information and install protection, as described in section 17.3 ("Health and safety – quality of working life"). For a description of ongoing legal proceedings, see section 20.5 ("Legal and arbitration proceedings").

**The Group is exposed to risks on the wholesale energy and $CO_2$ emission allowances' markets.**

The Group operates in the deregulated energy markets (mainly in Europe) through its generation, marketing and distribution activities. As such, the Group is exposed to price fluctuations in the wholesale energy markets (electricity, gas, coal, oil) as well as in the $CO_2$ emission allowances market. These fluctuations are particularly important in the current context of major tensions and volatility on the energy markets.

The Group manages its risk exposure mainly by buying and selling on the wholesale markets. Apart from the oil products markets, these are new

markets that are still developing. Therefore, a shortage of products or lack of depth can limit the Group's capacity to cover its exposure to risk in the energy market. In addition, these markets remain in part partitioned by country, as a result, among other things, of the lack of interconnections. They may thus experience significant increases or decreases in price movements and liquidity crises that are difficult to predict. Such fluctuations may have a significant unfavorable impact.

The management of energy market risks is in line with the energy market risks policy adopted by the Group (see section 4.1.1.2 ("Management and control of energy market risks")). The Group hedges its positions on these markets through derivative products such as futures, forwards, swaps and options negotiated on organized or over-the-counter markets. However, the Group cannot guarantee total protection, in particular, against significant price movements, which could have a material negative impact on its financial results.

**The Group is exposed to variations in the prices and in the availability of materials or services (other than fuels) which it buys for the carrying out of its activities.**

In a context of a significant and long-standing increase in raw material prices, the Group could face a sharp and sustained increase in the costs of certain critical products or services. Moreover, this increase could lead to a reduction of the offer if certain suppliers were forced to reduce their profit margins. Certain products or services are increasingly demanded, which could have an effect on their availability, in particular, products used for gas-fired combined cycle power stations, wind turbines and products and services in the nuclear field.

**The Group is exposed to financial risks.**

Because of its activities, the EDF group is exposed to financial risks:

- liquidity risk which has been particularly heightened in the current context of major tensions on the financial markets; In addition, as customary on the organized energy or financial markets, a margin call system has been established on certain over-the-counter transactions by certain entities of the Group in order to reduce or, if possible, eliminate the counterparty risk. Such system could lead the Group to mobilize liquidities due to current strong volatility on the energy and financial markets. In the context of the financial crisis, EDF has strengthened the monitoring and the control of the liquidity risk related to the margin calls on the energy and financial markets (see section 4.1.1.3.3 ("Liquidity risk"));
- exchange rate risk related to holdings in subsidiaries operating in currencies other than the euro, or to supply, in particular fuel and material, denominated in such currencies (see section 4.1.1.3.4 ("Exchange rate risk"));
- equity risk, in particular related to equity instruments held as part of the management of assets constituted to cover the costs of EDF's long-term commitments in the nuclear business and obligations related to pensions and other employee benefits and, to a lesser extent, to the shares held in direct participation and in the framework of cash management activities (see section 4.1.1.3.5 ("Equity risk"));
- interest rate risk related to the Group's financing and cash management activities and to the value of the Group's financial assets and liabilities; the interest rate risk lies in particular in portfolios of debt instruments held as part of the management of dedicated assets constituted to cover the costs of the Group's long-term commitments in the nuclear business and obligations related to pensions and other specific provisions in favor of the employees (see section 4.1.1.3.6 ("Interest rate risk"));
- counterparty risk inherent in contractual relationships; the monitoring and reporting procedures applied by the Group in connection with its exposure to counterparty risk were strengthened since 2008 (see section 4.1.1.3.7 ("Counterparty risk")).

The organization and management principles of these risks are described in section 4.1.1.3 ("Management and control of financial market risks") and their measures of control are described in section 9.9.1 ("Management and control of financial risks"). However, the Group cannot guarantee total protection, including in the event of continued significant movements in exchange rates, interest rates and equity markets like those seen in 2008.

## 4.2.3 Specific risks relating to the Group's nuclear activity

The EDF group is the world's leading nuclear operator. Nuclear electricity represents approximately 87% of its generation in France. EDF acquired in 2009, nuclear assets in the United Kingdom, and operates nuclear power plants in Germany through EnBW, and in the United States, through CENG: the nuclear share in the Group electricity mix is hence a major competitive advantage. The Group also plays an active role in the construction projects of new nuclear plants in France, the United Kingdom, the United States, China and potentially in Italy. Any event negatively affecting the nuclear business is likely to have greater consequences for the Group's image, activities, productivity, financial situation and results, than for those of its competitors, which generate proportionally less electricity from this source of energy.

**Due to its nuclear activities, the Group is exposed to substantial liability risks and possibly significant additional operating costs.**

Even if the Group has implemented risk control strategies and procedures corresponding to high standards for its nuclear activities, such activities, by their nature, still present potential risks. Therefore, the Group may face considerable liability as a result of, among others, incidents and accidents, breaches of security, ill-intentioned acts or terrorism, air crashes, natural disasters (such as floods or earthquakes), equipment malfunctions or mishandling in storage, handling, transportation, treatment or conditioning of substances and nuclear materials. Such events could induce a significant tightening of the nuclear plants' operating constraints, or the partial or total disruption of the operation of the Group's generation fleet, and could have serious consequences, especially in case of radioactive contamination and irradiation of the environment, for persons working for the Group and for the general population, as well as a material, negative impact on the Group's activities, strategy, outlook and financial situation.

A nuclear operator assumes liability for the nuclear safety of its facilities. The liability scheme that applies to European nuclear facilities operators, and the associated insurance, are described in sections 6.5.4.2 ("Special regulations applicable to nuclear facilities") and 4.1.3.4.1 ("Civil liability"). This scheme is based on the principle of strict liability for the operator. If there is an event which causes damage, the Group would be automatically liable within the limits of a financial ceiling established by applicable local law, regardless of the source of the event that caused the damage. The implementation of safety measures does not exonerate the Group from this type of liability.

The Group cannot guarantee that, in countries where it operates nuclear facilities, the liability ceilings established by law will not be increased or removed. For example, the Protocols amending the Paris Convention and the Brussels Convention, currently being ratified, provide for these ceilings to be raised. In addition, the Group cannot guarantee that the insurance policies covering this liability will always be available, or that their cost will not increase from their present level, or that the Group will always succeed in maintaining these insurance policies.

The damage to EDF's nuclear facilities is covered by an insurance policy (see section 4.1.3.4.2 ("Damage insurance for nuclear facilities")).

Despite this coverage, any event that would cause significant damage to a Group's nuclear facility could have a negative impact on the Group's business, financial results and financial situation.

**A serious nuclear accident occurring on a facility which does not belong to the Group may have material consequences for the Group.**

Despite the precautions taken during their design or operation, a serious accident on a facility which does not belong to the Group cannot be excluded and could result in public rejection of the nuclear business and lead to the competent authorities deciding to tighten noticeably operating conditions of power plants, or to cease the generation of electricity through nuclear means (and therefore suspend or cancel projects of development of nuclear power plants), or to cease authorizing, temporarily or permanently, operation of one or more nuclear plants. Such decisions might be taken even in the absence of an accident taking place.

Such accident, if occurring close to one or several facilities of the Group, could also have the effect of contaminating their environment, and thus jeopardize their operation.

Such events would have a material, negative impact on the economic model, strategy, business, profit, financial situation and outlook of the Group.

**The nuclear activity of the Group is subject to particularly detailed and restrictive regulations that may increase in severity.**

The nuclear activity of the Group is subject to detailed and restrictive regulations, in particular in France, with a system for the monitoring and periodic re-examination of operating authorizations, which primarily take into account nuclear safety, environmental and public health protection, and also national safety considerations (terrorist threats in particular). These regulations may be subject to significant tightening by national and European authorities (for a description of the "Nuclear Package" and the French law relating to transparency and safety in the nuclear field, see section 6.5.4.2 ("Specific regulations applicable to nuclear facilities")). Furthermore, a tightening of the regulations or a possible non-compliance with the current regulations could lead to having to shut down temporarily or permanently one or more plants of the Group.

Furthermore, a tightening of regulations or any non-compliance with the regulations in force could result in a temporary or permanent shut-down of one or more nuclear plants.

This could result in material increased costs of the Group's nuclear fleet, which would have a negative impact on its financial situation.

**For its nuclear activity, the Group depends on a limited number of contractors.**

Even though the Group operates a supplier diversification policy within its nuclear business, it is currently dependent on a limited number of contractors and suitably qualified and experienced contract personnel.

This situation:
- limits competition on markets on which EDF acts as buyer; and
- creates for the Group a risk of exposure to failure of one or more of these suppliers or specific skills.

This could have a negative impact on the Group's results and financial situation.

**The Group is exposed to variations in uranium procurement conditions and conversion and enrichment services conditions.**

Nuclear fuel purchases are part of the Group's operating costs.

For its nuclear power fleet in France, and since March 31, 2010 for its nuclear power fleet in the United Kingdom, EDF purchases uranium, conversion services and enrichment services through long-term contracts containing hedging mechanisms against price movements allowing it to reduce the impact of the price fluctuations. The main supplier is the AREVA group, but EDF is pursuing a policy of diversification by buying supplies from other producers (see section 4.3 ("Dependency factors") and section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). Prices and available quantities of uranium and conversion and enrichment services are subject to fluctuations resulting from factors, mainly political and economic, which the Group cannot control (in particular, increased demand in the context of worldwide expansion of nuclear energy or shortages linked, for example, to an operating accident in a uranium mine).

In the United States, CENG purchases uranium and conversion, enrichment and assembly services from several suppliers. The current contracts with these providers allow a supply of fuel and conversion, enrichment and assembly services for years to come, for the three plants of Calvert Cliffs, Nine Mile Point and Ginna.

However, the Group cannot guarantee that its uranium supply contracts and its conversion and enrichment services contracts, in France and abroad, will protect it completely against drastic or significant price increases. It cannot guarantee that when these long-term contracts expire, it will be able to renew them, in particular, at price conditions that are equivalent. This could have a negative impact on the Group's financial results.

**Risks relating to the transportation of nuclear fuel.**

The transportation of new or used nuclear fuels is an operation that requires special and restrictive safety and security measures. These constraints could increase further, generating additional difficulties and costs for the Group. Furthermore, several factors that are outside of the Group's control (such as opposition by local residents or anti-nuclear associations, for example, in the form of demonstrations to prevent nuclear material from being moved) may slow these operations. The operation may even be interrupted, in particular, in the event of an accident. As a result, the Group may be required to slow or interrupt some or all of the generation on the affected sites, due to either the non delivery of new fuel assemblies, or the saturation of storage facilities on the sites, which could have a negative impact on the Group's financial results.

**The nuclear fleet operated by the Group could require heavy and/or costly repairs or modifications.**

The fleet of nuclear facilities currently operated by the Group in France is highly standardized (see section 6.2.1.1.3.1 ("EDF's nuclear fleet")). This represents an advantage for the Group: it allows the Group to achieve economies of scale in equipment purchases and engineering, to apply improvements made to its newest power plants to its entire fleet, and to anticipate, in the event of a malfunction in a facility, the measures to be taken in the others.

This standardization carries the risk of a malfunction that is common to several power plants or series of power plants. The Group is currently addressing certain technical issues across its fleet that affect the availability factor Kd of the fleet (see section 6.2.1.1.3.3 ("Performance of the nuclear fleet")). The Group cannot guarantee that it will never again be confronted with other burdensome or costly repairs or modifications, to be carried out on all or part of the fleet, or that events will not occur which may have an impact on the operation of the fleet or its output, bringing about a temporary outage or closure of all or part of the fleet.

The Group also operates nuclear power plants elsewhere in Europe (notably the United Kingdom and Germany) and in the United States. It may also face costly repairing works or modifications to be made on these units or events which could have impacts on their performance, output or availability. Despite

maintenance work carried out by the Group on its power plants, it is possible that the output availability of certain units will be limited, particularly due to the ageing of equipment and component obsolescence.

Such events may have a negative impact on the Group's financial results and its activities.

**The Group may not be able to operate its nuclear power plants over a period at least equal to the period used for the calculation, in particular, of amortization and provisions.**

In the context of studies in relation with the third 900 MW level Ten-year Inspections, the French NSA publicly indicated at the beginning of July 2009 that it had not identified any generic problem calling into question EDF's ability to control the safety of its 900 MW reactors for 40 years. As provided for by the regulations, the NSA's position will be completed subsequently by a reactor-by-reactor position following each of the third Ten-year Inspections. However, the Group cannot guarantee that it will obtain the necessary authorizations at the appropriate time, or that such authorizations will be obtained, or that it will not be subject to conditions requiring the Group to carry out significant expenses or investments.

Nonetheless, the Group has based its assumptions for calculating accounting impacts linked to the operating life of its nuclear fleet in France on an operating life of 40 years (including depreciation and amortization on fixed assets, provisions, etc.). If the safety authorities opted for the closure of some units or power plants before 40 years, this would require accelerated replacement of the corresponding generation capacity by additional investments or recourse to electricity purchases on the market. It would also be necessary to review the depreciation and amortization plan to reappraise the residual operating life of the power plants in question. This would have a material adverse impact on the Group's financial results and financial situation.

In the United Kingdom, the currently provided operating life of the power stations in EDF Energy's existing nuclear fleet ranges between 30 to 40 years, depending on the power plant (see section 6.3.1.1.2.3 ("Existing nuclear business unit")). However, taking into account the safety rules applicable in the United Kingdom (see section 6.3.1.1.2.3 ("Existing nuclear business unit")), the Group cannot guarantee that EDF Energy will obtain the necessary authorizations at the relevant time to operate its existing nuclear power plants until the end of the current operating life, or that these authorizations will not be obtained subject to conditions that entail significant expenditure or investments for the Group.

EDF Energy has nevertheless used the current operating lives as a hypothetical basis for the calculation of accounting assumptions (depreciation and amortization on fixed assets, provisions, etc.) related to the operating life of the nuclear fleet in the United Kingdom (see section 6.3.1.1.2.3 ("Existing nuclear business unit")).

In the United States, an operating life of 60 years[1] was granted by the Nuclear Regulatory Commission ("NRC") for all CENG nuclear plants (the commissionings of which ranged between 1970 and 1988 (see section 6.3.2.3.3 ("Operations of CENG (nuclear generation and operation business)")), the joint venture created by EDF and Constellation Energy Group ("CEG") now holding the nuclear assets of CEG. However, the Group cannot guarantee, notably in the case of an incident affecting the safety or availability of facilities, that these power plants will actually be operated for such period.

If any power stations had to be closed before the end of their accounting operating lives, this may require accelerated replacement of the corresponding generation capacity by additional investments or recourse to electricity purchases on the market. It would also be necessary to review the depreciation and amortization profile and associated decommissioning provisions to take into account the reduced operating lifetime of the power stations. This could have a material adverse impact on the Group's financial results and financial position.

**The Group might not obtain the authorizations necessary in order to extend the operating life of its power plants beyond the terms currently provided for.**

In order to postpone the commissioning of replacement units and the related investments, and to continue to benefit from the cash flows from its existing fleet, the Group aims to lengthen the functioning life of its nuclear fleet beyond 40 years in France. In 2009, EDF submitted to the French NSA its proposed safety improvements for a fleet functioning life beyond 40 years. The corresponding investments are staggered over a period of about 20 years starting from the next ten-year period. The French NSA plans to have these improvements examined at the beginning of 2011 by the Permanent Experts Group (made up of experts *intuitu personae* appointed by the French NSA). In the United Kingdom, EDF Energy is also attempting to extend the operating life of its nuclear fleet beyond the declared period, and has already announced and taken into account the extension of the operating life of certain power plants (see section 6.3.1.1.2.3 ("Existing nuclear business unit")).

The Group cannot guarantee that it will obtain such extensions or that these extensions will only be obtained under certain conditions, which would have a negative impact on the Group's capacity to achieve its investment strategy.

**Construction of the EPRs could encounter problems or not be completed.**

The Group is involved in the carrying out of the construction of the European Pressurized water Reactor ("EPR") in Flamanville (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")) in order to renew its fleet of nuclear generating facilities in France and to serve as a model for the construction of new facilities internationally.

However:

- the Group might not obtain or see called into question by court rulings, the necessary authorizations required for the construction, commissioning and operation of the EPR;
- with regards, in particular for the Flamanville EPR, to a first-of-a-kind reactor, technical difficulties or other difficulties could occur during the development and construction and during the early stages of the operation of the EPR. These difficulties could slow or hinder the construction of the EPR and their commissioning or affect their performance;
- the global construction cost and the total cost of production of the EPR reactors could be higher than the estimates of EDF, because, among others, of increased raw materials prices, the evolution of exchange rates, the impact of price index provided in the contracts, technical and regulatory developments and the adjustment of provisions for risks.

The EPR program for renewal of the fleet of generation facilities is strategic for the Group's future. Any event leading to delay or clogging of this program, or affecting, the construction, of the first-of-a-kind EPR or subsequent units would thus have a material adverse impact on the Group's activity and financial situation.

1 Except for Nine Mile Point 2: 58 years.

**The Group remains liable for most spent fuel and radioactive waste from its nuclear power plants, especially long life, high-level waste from spent fuels.**

The nuclear fuel cycle is described in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"). In France, as described in this section, as an operator and producer of waste, EDF is legally responsible for spent fuels from the moment they leave the power plant, during their processing operations and during their long-term management, and it assumes this responsibility in accordance with guidelines set forth by public authorities and under their control.

In particular, as a nuclear operator or producer, the Group may incur liability resulting from applicable regulation of waste in the event of an accident and damage to a third party or the environment through these burnt fuels or waste, even if they are handled, shipped, owned, warehoused or stored by operators other than the Group (especially, in France, the AREVA group and ANDRA), in particular in the event of failure of such operators. If the Group were acknowledged as responsible for damages caused to third parties and/or the environment, the specific civil strict liability scheme applicable to nuclear operators would apply, within the ceilings specified by this scheme (see section 6.5.4.2 ("Special regulations applicable to nuclear facilities")).

In France, long-term radioactive waste management was the subject to several initiatives undertaken in the framework of the French "Bataille" law, and the passing of program law n° 2006-739 dated June 28, 2006 relating to the sustainable management of radioactive materials and waste (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). The Group cannot guarantee that all long-life high and medium activity waste will constitute "ultimate radioactive waste" in the sense of Article 6 of the law n° 2006-739, and that as a consequence this waste will be able to be directly stored in deep geological layers. The Group also cannot guarantee how long it may take for the public authorities to authorize such storage, which continues to result in ongoing uncertainties with respect to waste, liability and the costs that could result for EDF.

In the United Kingdom, British Energy has entered into agreements with the authorities concerning the management of certain radioactive waste from the nuclear power plants that it operates (see section 6.3.1.1.2.3 ("Existing Nuclear business unit – Restructuring Agreements – costs relating to radioactive waste management and decommissioning)). According to the terms of these agreements, the responsibility and certain costs related to the management of certain radioactive waste is transferred to the British Government. However, British Energy retains financial responsibility, and also technical and legal responsibility for the management, storage and elimination of waste that does not fall within the scope of the aforementioned agreements.

In the United States, in accordance with the Nuclear Waste Policy Act ("NWPA"), CENG is a party to the contracts entered into with the Department of Energy ("DoE"). As such, CENG has paid since November 6, 2009 the contributions provided by the NWPA to finance the cost of construction by the DoE of a federal storage for final disposal of spent fuel (CEG having paid contributions up to November 6, 2009). Given that the DoE declared that it could not take possession of spent fuel before 2020 (instead of 1998 as originally planned), CEG has been forced to undertake additional actions and incur costs to provide on-site fuel storage, allowing the operation of its plants until the availability of a federal storage. The funds reimbursed by the DoE until the closing of the transaction with EDF were received by CEG. CENG will receive the subsequent reimbursements (see section 6.3.2.3.5 ("The nuclear fuel – Storage of spent nuclear fuel – federal facilities")).

The Group cannot guarantee that it will have at its disposal, in due course and under acceptable financial conditions, long term storage and treatment solutions for the radioactive waste resulting from the operation of power plants located in the relevant countries.

This could have a negative impact on the Group's financial results and financial situation.

**The provisions made by the Group for spent fuel processing operations and long-term radioactive waste management could prove insufficient.**

EDF has made provisions for management operations (transportation, processing, conditioning for recycling) of spent nuclear fuel (see note 35 to the 2009 Consolidated Financial Statements) using the price and volume conditions in the agreement signed with AREVA in December 2008 which covered the period from 2008 to 2012. The amount of provisions to cover the period beyond 2012 could prove insufficient if the renewal conditions of this agreement for such future period proved more onerous than those currently applicable.

EDF had made provisions for long-term waste management based on an assumption of geological storage, and the conclusions reached in 2006 by the working group comprising ANDRA, public authorities and producers of nuclear waste (see note 35 to the 2009 Consolidated Financial Statements, and section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). If the program law n° 2006-739 of June 28, 2006 relating to the sustainable management of radioactive materials and waste reinforces, without excluding other fields of complementary research, that the "ultimate radioactive waste" must be stored in deep geological layers, the Group cannot guarantee that all long-life high and medium waste will be considered as such and nor the length of time in which this type of storage, if it was held, could be carried out. In consequence, the final cost of long-term waste management of the Group could exceed the provisions made in its accounts.

EnBW and CENG have also made provisions for their long-term nuclear waste management commitments.

The Group cannot guarantee that the amount of these provisions will be sufficient.

The evaluation of these provisions is sensitive to the assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Given these sensitivity factors, changing the parameters may lead to a significant revision of the provisions accounted for.

If such was the case, the inadequacy of the provisions for these commitments may have a material negative impact on the Group's financial results and financial situation.

**Decommissioning of the existing fleet of nuclear facilities may present currently unforeseen difficulties or be much more costly than currently expected.**

The decommissioning of the EDF nuclear fleet in France, and of the British Energy, CENG and EnBW nuclear fleets is described in section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants") and 6.3.1.2.3.1 ("Electricity businesses"). Given the size of the Group's nuclear fleet, its decommissioning represents a highly technical and financial challenge.

While the Group has evaluated the challenges, in particular technical, which this decommissioning brings (particularly the decommissioning of first generation power plants in France) and has identified the solutions to be developed, it has never dismantled nuclear power plants similar to those currently in service.

The Group has made provisions to cover the forecasted costs associated with decommissioning and last cores, including EnBW and CENG. The evaluation of these provisions is sensitive to the assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Given these sensitivity factors, changing the parameters may lead to significant revision of the provisions accounted for.

The Group cannot guarantee that the provisions made will be equivalent to the costs actually recorded in time, which would have a negative impact on the Group's financial results and financial situation.

In the United Kingdom, under British Energy's restructuring arrangements, the decommissioning costs from the British Energy's existing nuclear power stations will be paid for from the Nuclear liabilities Fund and, should the Fund be insufficient, these costs will be underpinned by UK Government (see section 6.3.1.1.2.3 ("Existing Nuclear business unit" – "Restructuring Agreements – costs relating to radioactive waste management and decommissioning")).

**Dedicated assets reserved by the Group to cover the costs of the Group's long-term commitments in the nuclear business (such as radioactive waste and decommissioning) may prove insufficient and result in additional disbursements.**

As of December 31, 2009, the market value of the EDF's portfolio of dedicated assets was approximately €11,436 million against €8,658 million at December 31, 2008 (see section 6.2.1.1.3.7 ("Assets available to cover long-term nuclear power-related commitments (outside the operating cycle)")). These assets are built up gradually on the basis of spending estimates and the timeframe which the Group will have to meet.

EDF's dedicated assets may be judged insufficient according to the June 28, 2006 law's implementation regulations (see section 6.5.4.2 ("Specific regulations applicable to nuclear facilities")) or by the administrative authority, and lead to adjustment measures (in particular complementary allocations for the dedicated assets). These dedicated assets can also prove to be insufficient at the moment of actual payment, if actual costs are different or if the decommissioning and storage costs schedule is modified. This would have a material, negative impact on the EDF's financial situation. Moreover, stricter national (in particular those which could have an impact of the basis of the dedicated assets to be constituted by EDF) or European regulatory constraints may lead to increasing demands for the constitution of dedicated assets and have an effect on EDF's financial situation.

Finally, although these assets are constituted and managed in accordance with strict prudential rules (see section 6.2.1.1.3.7 ("Assets available to cover long-term nuclear power-related commitments (outside the operating cycle)")), the Group cannot guarantee that variations in financial markets prices will not have a material, negative impact on the value of these assets (see section 9.9.1.6 ("Management of financial risk on EDF's dedicated asset portfolio" for a sensitivity analysis)) which could lead EDF to make further disbursements in order to restore the value of these assets.

In Germany, EnBW established funds reserved for covering the cost of its long-term commitments, particularly with regard to nuclear power. However, their value might be insufficient for covering the corresponding costs, principally due to variations in financial market prices, and this could lead EnBW to make further disbursements.

In the United States, in accordance with the NRC regulations and conditions imposed by the states concerned, CENG established funds strictly dedicated to cover the costs of plants decomissioning. The strategy of establishment of these funds is based on the estimated costs necessary to deconstruction and relating installments. The estimate by CENG of the income generated by these funds was based on various factors, including the strategy of assets allocation for investments, the rate of historical performance and market conditions. It is anticipated at this time that the activities of deconstruction will take place until 2083. Any changes affecting costs or deadlines for deconstruction, or any changes affecting the income generated by the funds, are likely to have an impact on the ability of funds to cover the costs of plants deconstruction, which could lead CENG to make further disbursements.

Such events could have a negative impact on the Group's financial situation.

## 4.2.4 Risks related to the structure and changes within the Group

**It is possible that the Group's development strategy cannot be implemented in accordance with the goals defined by the Group.**

The Group intends to continue its development in the electricity, gas and energy services industries, both in France and abroad, in line with its industrial project, depending on its business model in each area and in light of any relevant experience (upstream/downstream balance, commercial strategy, development of renewable energy sources or in other production methods: nuclear, hydropower, coal, gas combined-cycle, etc.). It is thus implementing programs for reorganization, increasing profitability, (see risk factor entitled "The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility") and disposals.

The Group may fail to implement international nuclear generation projects to which it is committed or may not be able to implement such projects under satisfactory economic, financial and legal conditions.

Indeed, the EDF group is committed through partnerships or equity investments to international projects for the construction and operation of nuclear power plants (in the United States, the United Kingdom, China, etc.). During the development phase, these projects require obtaining administrative authorizations, licenses, permits and, in certain cases, the setting of additional partnerships. These are large-scale construction sites calling for substantial investment. The financing conditions have yet to be confirmed and, given the current economic context, such financing could be delayed. Furthermore, the regulatory framework in some countries is in the process of being updated, which could have an impact on the Group's commitments and liability. Even with the benefit of protective contractual arrangements, the Group cannot guarantee that any or all of these projects will be implemented in accordance with scheduled timeframes, under satisfactory economic, financial or legal conditions or that they will, in the long term, generate the profitability initially anticipated. This could have a negative impact on the Group's image and financial situation.

Furthermore, the development of the Group's gas business is an important issue, both with respect to the use of gas in electricity generation and the development of dual gas/electricity offers. The competitive environment of the gas segment is evolving in France and in Europe with the emergence of new players or mergers of energy companies.

Demand for gas in Europe is growing and there are significant quantities of untapped reserves throughout the world. However, sources of supply are remote and capacities for gas transportation (by gas pipeline or by liquefied natural gas (LNG) tanker), LNG terminals and capacities for storage are still limited. To implement its gas strategy, the Group must not only have access to competitive sources of supply, but also to logistical infrastructures (such as storage, gas pipelines and LNG terminals) that allow it to transport its gas to areas close to points of consumption and to produce synergies between its different entities (including those which it does not control). The

Group cannot guarantee that it will be able to either access these gas assets, or acquire them or participate in their development, or achieve the expected synergies, under acceptable financial conditions. Any one of these factors could slow the development of the Group's gas strategy, which would have a negative impact on its activities, its financial results and its outlook.

Finally, the Group intends to develop and consolidate its offer of service integrated solutions, in particular its energy eco-efficiency services, to increase sales per customer as the energy market in Europe opens up to competition and to deal with issues relating to energy efficiency and Sustainable Development.

The energy-related services market is very competitive, and the energy efficiency market possesses a strong potential for development. The Group cannot guarantee that its energy-related services offer will continue to grow successfully. If the Group cannot implement its development policy in the area of energy-related services, this may have a negative impact on its financial results and outlook.

More generally, the Group may be confronted with an unexpected change in the regulatory, economic and competition framework which may render its decisions inadequate, or may encounter difficulties in implementing or changing its strategy, which could have a negative impact on the Group's financial results and outlook.

**Risks related to acquisitions and disposals.**

In the context of its development strategy, the Group has carried out and could be led to carry out transactions involving the acquisition of assets or interests, as well as mergers or the creation of joint venture companies, and more generally all types of external growth transactions.

External growth transactions involve in particular the following risks : (i) the assumptions used by the Group for the evaluation of the acquisition could turn out to be unrealizable, particularly concerning anticipated market prices, cost savings, profits, synergies and profitability; (ii) difficulties could arise concerning the quality and performance of acquired assets or underestimating the liabilities of acquired companies; (iii) difficulties could arise with respect to the implementation of the integration of acquired activities or companies; (iv) the Group could be unable to retain certain key employees, clients or suppliers of acquired companies; (v) the Group could be obligated to or wish to terminate certain preexisting contractual relationships under costly and/or unfavorable financial conditions; (vi) the Group could increase its indebtedness with a view to financing these acquisitions, thus limiting its financial flexibility and possibilities of obtaining further loans in the future; and (vii) vis-à-vis the anti-trust authorities, the Group could be obligated to enter into commitments the implementation of which would be carried out under less favorable conditions than planned for the Group.

Consequently, the benefits from future or completed acquisitions could be lower or less rapidly achieved than expected, which could have a negative impact on the Group's financial results, financial situation and outlook.

The Group has also carried out and could be led to carry out transactions involving the disposal of assets. In the context of these disposals, the Group may provide guarantees concerning the assets sold, and consequently have to pay indemnities or price adjustments to the purchaser, which could have a negative impact on the Group's financial results, financial situation and outlook.

The Group may also find that it has been unable to carry out the external growth transactions and disposals that it expects to carry out, or that it has made them at a price different to that desired, due in particular to financial, regulatory or contractual constraints, or even political acts outside France. This may have a negative impact on the Group's financial results, financial situation and outlook.

**The various reorganizations rendered necessary by opening up of the market could have operational and financial consequences for EDF.**

Opening up of the market has in particular resulted in a transfer of mainly distribution activities to subsidiaries and the reorganization of the joint entities through which EDF and mainly GDF SUEZ (formerly Gaz de France) used to manage sales, billing, customer services and distribution networks.

The various reorganizations could have an impact on the operation of sales and distribution activities and on the relationships with local authorities.

Furthermore, they could generate substantial costs, associated in particular with adapting organizational structures and support functions, in particular, information systems.

**Risks relating to information systems.**

The Group operates multiple and highly complex information systems (such as servers, networks, applications and databases etc.), which are essential for the everyday operations of its commercial and industrial business, and which must adapt to a rapidly changing environment. A problem with one of these systems may have material, negative consequences for the Group. In particular, if the information systems put in place or still to be adapted following the total opening up of the market on July 1, 2007 are lacking in terms of reliability or performance, this may have material, negative consequences for the EDF group.

Finally, as a general matter, the Group cannot guarantee that the policy of reinforcing information back-up systems will not meet with technical difficulties and/or delays in implementation, which could – in the event of a serious incident – have a material, negative impact on the activity, financial results and financial position of the Group.

**EDF is controlled by the French State, which is its principal shareholder.**

Pursuant to the law of August 9, 2004, the French State is EDF's principal shareholder and must remain the holder of more than 70% of its share capital. Under French law, a majority shareholder controls most corporate decisions relating to the company, including those that must be passed by the Shareholders' Meeting (in particular, appointment and dismissal of members of the Board of Directors, distribution of dividends and amendments to the by-laws). In addition, the legal dilution limit for the French State holding may limit EDF's capacity to resort to the capital markets or carry out external growth transactions.

**Much of the Group's workforce belongs to organizations common to EDF and GDF SUEZ; the Group therefore depends in part on management mechanisms implemented in these common structures.**

A large portion of people employed by the Group belongs to organizations common to EDF and GDF SUEZ (almost all belonging to ERDF and GrDF's common service, distribution subsidiaries of EDF group and GDF SUEZ group). Some decisions made in the context of these common organizations may accordingly have an impact on EDF, in particular on costs and on the conditions of management of its resources. Moreover, in consequences, EDF and GDF SUEZ may have divergent interests and views concerning these common organizations, which may have a negative impact on the Group's labor relations climate, financial results and financial structure.

**The Group does not own a controlling majority of some of its strategic subsidiaries and holdings, or shares control of these entities with other shareholders.**

As described in section 6.3.1.2.2 ("Detail of EDF's holding in EnBW"), the EDF group shares control of EnBW with OEW. This shared control is exercised through a shareholders' agreement. The Group cannot, however, guarantee that it will always be in agreement with OEW on its policy towards EnBW.

This may also be the case with respect to Edison, where the two shareholders, EDF and A2A (formerly AEM Milan) and its partners, have joint control, and whose relationships are governed by a shareholders' agreement (see section 6.3.1.3.1.2 ("Joint takeover of Edison by EDF and A2A")). In addition, advantages which must result from the joint takeover of Edison by EDF and A2A, in particular as regards the Group's gas strategy, depend, in part, on the possibility to combine successfully and effectively Edison's activities with those of the Group.

Furthermore, in November 2009 the Group finalized the acquisition of almost half of CEG's nuclear power generation and operation activities, via an equity stake of 49.99% in CENG (see section 6.3.2.3 ("Acquisition of 49.99% of CEG nuclear assets")). The Group shares the control of CENG with Constellation Energy Group (CEG) and this control is exercised in the context of a shareholders' agreement (see section 6.3.2.3.2 ("Organization and governance rules of CENG")). The Group cannot guarantee that it will always be in agreement with CEG, particularly with respect to the strategy to be implemented concerning CENG, which could notably limit the benefits expected from the transaction.

Other Group businesses are, or will be in the future, exercised within other entities in which the Group shares control, or in which the Group is a minority shareholder. In these situations, the Group may find itself confronted with an impasse when partners disagree or decisions are made which are contrary to its interests.

This may limit the Group's ability to implement defined strategies and may have a material adverse impact on its business, financial situation or prospects.

**Shareholders in some of the Group's subsidiaries and holdings have put options allowing them to require a buyback of their shares or assets by the Group, which, accordingly, may be forced into re-purchasing these shares at an unfavorable time or under unfavorable conditions.**

The structure and conditions of the put options that CEG concerning its non-nuclear generation assets, the shareholders of SPE, EnBW and EDF Énergies Nouvelles, have over the Group are described in sections 6.3.2.3.1 ("Creation of the new joint venture with CEG"), 6.3.1.4.2 ("Benelux"), 6.3.1.2 ("Germany – EnBW") and 6.4.1.1.2 ("EDF Énergies Nouvelles").

If put options are exercised, the Group may be forced to purchase the underlying securities or assets at prices, set by the terms of the agreements in force, which could exceed their market value. In addition, the financing of these purchases could interfere with other Group acquisition or investment expenses, delay them, or oblige the Group to seek financing under less favorable conditions, which could have a negative financial impact on the Group.

**The Group may find itself forced to launch a tender offer for the acquisition of listed companies in which it has holdings.**

The Group has holdings in a number of listed companies for which current legislation may require, under certain conditions, a shareholder exceeding certain thresholds to launch a tender offer to purchase all of the existing share capital. The Group may, therefore, be forced to launch such an offer under unfavorable conditions, especially with respect to price, which may have a negative impact on its financial situation.

**Risks due to the international dimension of the Group's activities.**

Some Group investments and commitments are exposed to the risks and uncertainties associated with doing business in countries which may have, or have recently had, a period of political or economic instability. Several countries in which the Group operates have less developed regulations providing less protection, maintain or could initiate controls or restrictions on repatriation of profits and capital invested, fix or could fix taxation and fees affecting the Group's activities, and impose or could impose restrictive rules with regards to the business of international groups. In these countries, the electricity sector is also subject to sometimes rapidly changing regulations which could be influenced by political, social or other considerations, which may have an effect on activities or financial results of the Group's subsidiaries and thus not be in its interest. The occurrence of any of these events may have a negative impact on the Group's activities, financial results and financial situation.

Finally, the Group has developed or built a portfolio of "Independent Power Plants" ("IPP") in different parts of the world, especially in Brazil, Vietnam, Laos and China, in which it plays one or more roles (engineering, project management, project manager, investor or operator). In these different capacities, the Group may find itself liable or the Group's financial performance may be affected, especially if the return on capital employed for the IPP is lower than expected, if long-term electricity contracts or "pass-through" clauses are questioned, or in the event of major changes to electricity market rules in the country concerned.

**The Group must continually adapt its skills in a rapidly changing environment and renew much of its workforce while transferring experience and skills to new employees.**

The challenges associated with achieving the Group's strategic objectives in a rapidly changing environment (in particular, the total opening up of markets to competition, international expansion of electricity generation (nuclear or clean coal), development of renewable energy sources etc.) require a continuous adaptation and anticipation of its areas of competence, in particular functional and geographic.

In France, a large number of EDF employees is each year at the retirement age, despite the impact the reform of the special retirement program for gas and electricity industry employees has on the average retirement age. For example, in nuclear generation and network maintenance, approximately 40% to 45% of the workforce could retire during the next ten years. Although this situation may represent an opportunity to adapt the expertise of employees to the Group's new challenges, the renewal of this workforce requires anticipating the knowledge transfer and managing competition to recruit skilled talent.

The EDF group considers the development of skills as a major challenge and will therefore do its utmost to recruit, retain, redeploy or renew these staff and skills in time and under satisfactory conditions. However, it cannot guarantee the measures adopted will always prove totally sufficient, which may have an impact on its business and financial results.

**EDF group may be required to satisfy significant obligations related to pensions and other employee benefits.**

The retirement systems applicable in the various countries in which the Group operates involve long-term commitments related to the payment of funds to the Group's employees (see note 36 to the 2009 Consolidated Financial Statements). In France, in addition to these pension obligations, there are also commitments related to post-employment benefits and long-term benefits for employees currently in service.

In order to cover these commitments, the Group has put into place reserved funds or pension funds as applicable, these assets at the end of 2009 only providing partial coverage of these commitments, which maturities, however, are relatively staggered.

The amounts of these obligations, the provisions and the additional contributions to compensate for the shortage of funding for its pension scheme are calculated on an estimated basis using certain hypotheses, in particular, actuarial forecasts and a discount rate, which may be modified in relation to market conditions as well as by regulations governing retirement benefits paid out by the general system and those paid out by the Group. These hypotheses and rules may be adjusted in the future and may increase the current commitments of the Group in respect of pensions and other employees benefits and therefore require corresponding provisions increases.

Furthermore, if the value of the reserved funds or the pension funds were to prove insufficient with regard to the corresponding commitments, principally due to calculation assumptions or developments in the financial markets (this could be the case notably in the United Kingdom (see section 6.3.1.1.2.7 ("Pension schemes")) and the United States (see section 6.3.2.3.6 ("Pension"))), this could involve the Group being obligated to make additional contributions to the relevant funds and have a negative impact on its financial situation and financial results.

**Employee conflicts could have a negative impact on the Group's activity.**

The Group cannot ensure that its employee relationships will not deteriorate or that employee unrest will not occur. Strikes, stoppages, claims or other social problems may harm its business. The Group has not taken out any insurance for losses due to interruptions to business caused by employee demonstrations. As a result, its financial situation and operating results may be adversely affected by employee unrest.

**The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility. The objectives set for these programs may not be achieved.**

The Group has implemented programs to improve its operating and financial performance and to reinforce its financial flexibility. After the achievement of the *Altitude* program in 2007, the Group implemented a new program, the program *Excellence Opérationnelle* (see section 12.1 ("Performance improvement: "*Excellence Opérationnelle*" program")). The implementation of such program within the Group was initiated in 2008 on a long-term basis. It aims to improve the Group's results by achieving synergies and continuous progress on its operational processes and supports, its purchasing methods, its conversion and expansion programs.

The Group cannot guarantee that these programs will produce the expected results within the established timeframe. This may have a material adverse impact on the Group's financial results, financial situation and outlook.

**Risks due to changes to the IFRS standards applicable to the Group.**

2009 Consolidated Financial Statements have been prepared, as for the two previous years, in accordance with international accounting standards published by the IASB as approved by the European Union on December 31, 2009 (see note 1 to the 2009 Consolidated Financial Statements).

These references are evolving and new standards and interpretations are currently in the process of being drafted and/or approved by the qualified international bodies. The Group is studying the potential impact of standards or interpretations in the process of being approved or authorized by the qualified international bodies on its financial situation. In relation to standards or interpretations in the process of being drafted by the qualified international bodies, the Group cannot predict the possible evolutions that these standards or interpretations could entail, or the impact that they could have on its consolidated financial statements.

## 4.2.5 Risks related to the capital structure of EDF and the listing of its shares

### SIGNIFICANT VOLATILITY OF THE MARKET PRICE OF SHARES.

Stock markets have experienced significant fluctuations in recent years, which have not always been related to the performance of the specific companies whose shares are traded. Such fluctuations may materially affect EDF share price.

EDF share price may also be materially affected by a number of factors, including factors relating to the EDF group, its competitors, general economic conditions and, in particular, the energy industry.

### FLUCTUATION IN EXCHANGE RATES.

The EDF shares are quoted only in Euros and any future payments of dividends on the shares will be denominated in Euros. The share price and any dividends paid to an EDF shareholder in other currencies could be adversely affected by a depreciation of the euro.

### RISKS RELATED TO FUTURE SALES OF EDF SHARES BY THE FRENCH STATE.

As of December 31, 2009, the French State was holding 84.48% of EDF's share capital. If the French State decided to reduce further its holding in EDF capital, such sales by the French State, or the perception that such sales could occur, could adversely affect EDF share price.

# 4.3 Dependency factors

In 2009, EDF and ERDF had 20,008 suppliers (compared with 19,439 in 2008 and 20,289 in 2007). EDF and ERDF's five most important suppliers accounted for 10.5% of the total amount committed by EDF[1] and ERDF, and the 10 most important accounted for 15.8%.

Some suppliers and subcontractors of goods and services purchased by the Group in connection with its business cannot be replaced. The issue of EDF's dependency on its suppliers is principally related to the nuclear power sector and, to a lesser extent, the computing and telecommunications sector.

The EDF group has developed a skill as the architect-assembler of its generation fleet and as a nuclear fuel cycle integrator, which gives EDF a technical expertise independent of that of its suppliers.

The EDF group has very important commercial relations with the AREVA group, which participates in each phase of the nuclear fuel cycle. The AREVA group also participates in the construction and equipment sector, together with maintenance of the nuclear fleet.

In France, the AREVA group is EDF's main supplier in the nuclear sector. In this respect, EDF considers itself in a situation of interdependence with the AREVA group.

## Nuclear fuel cycle

Relations between EDF and the AREVA group, with respect to the fuel cycle, are governed by contracts which are multi-annual. The commercial terms of the contracts may be less favorable when renegotiated than the terms that are currently applicable. With respect to the front-end nuclear fuel cycle (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – A. Front-end")), EDF still relies to a large but decreasing extent upon the AREVA group, which accounted for approximately 58% of EDF's purchases in the front-end cycle in 2009, against approximately 68% in 2008:

- the AREVA group supplies an important part of EDF's natural uranium needs. However, EDF is pursuing a policy of diversifying its sources of supply in order to balance market shares between the AREVA group and other suppliers;
- in relation to the nuclear conversion process, a large majority of EDF's needs is met by the AREVA group's Comurhex factory, in competition with other worldwide suppliers;
- in the enrichment area, EDF relies predominantly on the AREVA group, in particular, through the enrichment services of its Georges Besse I factory. In 2007, EDF and AREVA extended their contractual relationship concerning the use of George Besse I until 2010 and contractualised in 2008 the services expected from the new Georges Besse II plant. EDF also buys enrichment services from other suppliers that have already mastered ultracentrifuge technology;
- in relation to enriched uranium reprocessing ("URE"), EDF relies on the AREVA group for certain types of services and on foreign suppliers (Tenex and Urenco) for other types, notably enrichment;
- EDF uses two suppliers for the manufacture of fuel assemblies: the AREVA and Westinghouse groups;

All operations for management of spent fuel for the plants in France are carried out in the AREVA group's factory at La Hague. These operations, as well as the recycling of products coming from the treatment in the form of MOX fuel or fuel with URE are realized according to the EDF – AREVA agreement dated December 19, 2008 which follows the previous 2001 agreement. The technical and financial conditions of these operations as well as the amount of discharge for the EDF share of the decommissioning of facilities at La Hague have been specified for the 2008-2012 period.

With respect to the back-end nuclear fuel cycle, see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – B. Back-end").

## Power plant development and maintenance

The AREVA group is EDF's main supplier with regard to power plant development and maintenance. In particular, the AREVA group supplies nuclear boilers, corresponding security studies and their spare parts. A diversification program has been undertaken for several years, in particular, with Westinghouse and Mitsubishi, for the replacement of some major components (steam generators in particular) and provision of maintenance services (for instance chemical cleaning of steam generators).

In order to prepare for the renewal of its generation facilities, EDF has chosen to rely on EPR technology, developed with the AREVA group, by launching a first-of-a-kind project. In relation to this first-of-a-kind project, in 2007 EDF signed a contract with AREVA for the supply of the EPR boiler at Flamanville 3.

EDF also maintains relations with the Alstom group for the maintenance of certain components of nuclear and fossil-fired power plants. In addition, Alstom is the supplier of the engine room of the EPR boiler at Flamanville 3. Goods and services supplied to EDF by Alstom are particularly important with respect to the maintenance of the nuclear power plants' turbo-generators and of certain large-sized components of the fossil-fired generation facilities. EDF does not consider itself in a situation of dependence on the Alstom group, which is in competition on most of its activities. In particular, this competition led in 2008 to the attribution divided between Alstom and Toshiba of the important market for the renovation of generators of the nuclear power fleet.

Finally, the EDF group does not believe that, overall, it is in a situation of dependence with any given customer.

1 Purchases of fuel excluded.

# 5 Information about the Company



## 5.1 History and development of the Company

In this *Document de Référence*, the references to the articles of association refer to those of the Company as approved by the French decree n° 2004-1224 of November 17, 2004, and pursuant to French law n° 2004-803 of August 9, 2004 relating to the public electricity and gas service and to electricity and gas companies (the "law of August 9, 2004"), and as modified from time to time.

### 5.1.1 Name and registered head office

The name of the Company is: "Électricité de France". The Company may also be legally named solely by the "EDF" acronym.

The Company's head office is located in Paris (8th *arrondissement*): 22-30, avenue de Wagram.

### 5.1.2 Commercial registry, APE code

The Company is registered with the French *Registre du Commerce et des Sociétés de Paris* (Commercial and Corporate Registry of Paris) under the number 552 081 317.

Its APE code is 401 E.

### 5.1.3 Date of incorporation and duration of the Company

Pursuant to French law n° 46-628 of April 8, 1946, EDF was created in the form of a Public Industrial and Commercial Establishment (*Etablissement Public industriel et commercial*, or "EPIC").

EDF was transformed into a French *société anonyme* by the law of August 9, 2004 and the French Decree of November 17, 2004. The duration of the Company is set at 99 years starting from November 20, 2004, except in the case of early dissolution or of extension.

### 5.1.4 Legal form and applicable legislation

Since November 20, 2004, EDF has been a French *société anonyme* with a Board of Directors governed by the laws and regulations applicable to commercial companies, in particular the French Commercial Code, insofar as these are not derogated from more specific laws, notably such as French law n° 46-628 of April 8, 1946, French law n° 83-675 of July 26, 1983, French law n° 2000-108 of February 10, 2000, the law of August 9, 2004, the law of December 7, 2006 relating to the energy sector and by its articles of association.

### 5.1.5 History

The following elements describe the major stages of the Group's development.

EDF was created in 1946. Before 1946, the electricity sector had developed around numerous local companies across France. At the end of the 1930s, there were approximately 200 generation companies, approximately 100 transmission companies and 1,150 distribution companies. This multitude of private companies, in addition to some 250 local utilities, was responsible for approximately 20,000 distribution concessions. A certain number of large groups emerged from this apparent fragmentation in the fields of generation and distribution.

In 1946, the electricity and gas sectors were nationalized. The French law of April 8, 1946 created EDF in the form of an EPIC and created a special status for the personnel of the Power and Gas Industries (*Industries Électriques et Gazières*, or "IEGs"). The law nevertheless left in existence a certain number of non-nationalized distributors (local distribution companies, "LDCs").

The industrial base was developed over the period from 1946 to 2000. Initially, there was a fleet of fossil-fired generation facilities using coal then oil, and hydropower facilities, in particular with the construction of the dams of Tignes in 1952 and Serre-Ponçon in 1960. In 1963, following the French State's decision to guarantee France's independence in the energy field through nuclear power, EDF put into service the first commercial-scale nuclear

generation unit at Chinon (70 MW), the first of a series of 6 generation units of the Uranium Natural Graphite Gas ("UNGG") family, the construction of which was staggered until 1972. The oil shocks of 1973 and 1979 resulted in an acceleration of the replacement of fossil-fired power with nuclear power. In 1969, the UNGG was abandoned in favor of the Pressurized Water Reactor ("PWR") family, which was used for new power plants: 34 generation units of 900 MW with construction staggered until 1988, then 20 generation units of 1,300 MW with construction staggered until 1994, then with 4 N4 generation units of 1,450 MW entering into service in 2000 and 2002.

Beginning in the 1990s, EDF embarked on a significant expansion abroad. In 1992, the Group obtained an interest in the share capital of Edenor, a distribution and supply company in Argentina, which was later increased to 90%. In May 1996, EDF entered the share capital of the Brazilian electricity company Light, a distribution and supply company located in the State of Rio de Janeiro and as of December 31, 2004, EDF held 94.8% of the share capital of this company. In December 1998, EDF acquired 100% of London Electricity (renamed EDF Energy on June 30, 2003). This policy was pursued in 2001 with the acquisition of 34.5% of EnBW and the acquisition of shareholding interests in the Italian company Edison by the IEB consortium (63.8%), of which EDF held 18.03%, and in 2002 when London Electricity acquired 100% of the share capital of EPN Distribution plc. and of Seeboard plc. two distribution companies located in the east and the south-east of England.

In France, the major development of recent years has been the opening of the market under the impetus of European regulation. In February 1999, sites where electricity consumption exceeded 100 GWh per year, some 20% of the market, became entitled to choose their supplier. The eligibility threshold was then progressively lowered. In May 2000, 30% of the market was thus opened to competition, then 37% in February 2003. In July 2004, the totality of the market for non-household customers, equivalent to 69% of the entire market, was opened. Since July 2007, the market has been fully open to competition and includes residential customers.

In parallel, the structures necessary for effectively operating a competitive market were put into place. The French Electricity Regulation Commission (which became the French Energy Regulation Commission — *Commission de Régulation de l'Énergie*, or "CRE") was created in May 2000. In the same year, in order to guarantee non-discriminatory access to all operators in the market, EDF created the Electricity Transmission Network (*Réseau de Transport d'Électricité*, or "RTE", which became a wholly-owned subsidiary of EDF in 2005 as "RTE-EDF Transport"), an independent internal entity responsible for managing the high voltage and very high voltage public electricity transmission network. In 2000, the Group formed the trading company, EDF Trading, with the trading specialist Louis Dreyfus. It became a wholly-owned subsidiary in 2003. In 2001, Euronext and various industrial and financial operators on the electricity market, including EDF, created Powernext, the French electricity exchange. In 2001, in exchange for authorisation to take an interest in EnBW obtained by EDF, the European Commission requested EDF to implement a system of power supply capacity auctions (Virtual Power Plants, or "VPP") to facilitate access to the market for competitors. In 2003, the EDF group sold its shareholding in the Compagnie Nationale du Rhône to SUEZ (now GDF SUEZ).

On November 20, 2004, in accordance with the French law of August 9, 2004, EDF was transformed into a French *société anonyme* with a Board of Directors.

On May 12, 2005, EDF and A2A S.A. (formely AEM S.p.A) entered into agreements relating to their decision to take joint-control of Edison. Following the launch of a takeover bid on October 4, 2005, this joint takeover was completed on October 26, 2005, when the offer was closed.

Since 2005 the EDF group implemented its strategy of refocusing on Europe by selling its controlling interest in its subsidiaries Edenor and Light and its assets in Mexico.

Finally, EDF was listed on the stock exchange during the second half of 2005. This operation was made possible by the company issuing 196,371,090 new shares and by the French State selling more than 34.5 million shares to employees and former employees of EDF and of certain subsidiaries. This was followed by the sale of 45 million shares owned by the State on December 3, 2007.

By the end of November 2006, EDF Énergies Nouvelles, a subsidiary of which the EDF group held 50%, became listed on the stock market. This operation involved the issuance of 18,946,854 new EDF Énergies Nouvelles shares, 4,798,464 of which were reserved to the EDF group.

Since January 1, 2008, EDF's distribution business has been carried out by Électricité Réseau Distribution France (ERDF), a subsidiary wholly owned by EDF, as a result of the contribution of the distribution activities in compliance with the French energy sector law of December 7, 2006.

Since 2008, the EDF group has become a major player in the revival of nuclear power abroad by creating a joint venture with the Chinese electricity provider CGNPC, by concluding an agreement with a view to acquiring British Energy in the United Kingdom through a public offer (acquisition which was completed on January 5, 2009), and by entering into an agreement, which was finalised on November 6, 2009, for the acquisition of almost half of the nuclear assets of Constellation Energy in the United States.

Furthermore, at the end of 2009, EDF acquired 51% of the Belgian company SPE.

## 5.2 Investments

For a description of the main investments made by the Company for the period 2008-2009, see section 9.8.1.2 ("Net cash flow used in investing activities") of this *Document de Référence*. As regards the Group's investment policy in the future, see section 6.1.4 ("Investment policy") below.

# Business overview

6

The EDF group is an integrated energy company with a presence in a wide range of electricity-related businesses: generation, transmission, distribution, supply and energy trading. It is France's leading electricity operator and has a strong position in the three other main European markets (Germany, the United Kingdom and Italy), making it one of Europe's leading electrical players as well as a recognized player in the gas industry. With worldwide installed power capacity totaling 136.3 GW[1] as of December 31, 2009 (134.0 GW[1] in Europe) and global energy generation of 618.5 TWh[1], it has the largest generating capacity of all the major European energy corporations with the lowest level of $CO_2$ emissions due to the significant proportion of nuclear and hydroelectric power in its generation mix. The EDF group supplies gas, electricity, and associated services to more than 37.9 million[1] customers accounts[2] worldwide (including approximately 27.7 million in France).

The EDF group's businesses reflect its adoption of a model aimed at finding the best balance between French and international activities, competitive and regulated operations and based on an upstream-downstream integration. In 2009, the Group's consolidated revenues were €66.3 billion, the net income (Group share) was €3.9 billion, and earnings before interest, tax, depreciation and amortization was €17.5 billion.

# 6.1 Strategy

The large scale crisis affecting the global economy since autumn 2008 weighed heavily on the European electricity demand (with an average decrease of 4.8%[3] in 2009 compared to 2008), and the European gas demand (with a decrease of 6%[3]), as well as on the prices. In spite of this, the energy challenge remains, namely to meet growing demand against a backdrop of shrinking resources and climatic constraints.

The International Energy Agency ("IEA") thus intensifies in its latest publication "World Energy Outlook 2009", its messages already issued in 2008: questions relating to energy and climate change remain urgent. The necessary investments, which have sometimes been delayed because of the crisis, should not be questioned over time as major difficulties will still arise, particularly risks related to supply shortages and price bursts, as well as a rise in $CO_2$ emissions leading to large-scale climate change.

This global context and the priorities defined at a European level concerning energy security and reducing emissions of greenhouse gases require to invest both upstream (by giving priorities to technologies emitting little $CO_2$ or "low carbon") and downstream (control of energy demand via more efficient use and shared development of decentralized renewable sources). Nuclear power, which can combine competitiveness with self-sufficiency and low $CO_2$ emissions, is now proving to be an essential element of the future energy mix, both in France and in many other parts of the world, as demonstrated by the political will aiming at extending the operational life of nuclear power plants or the projects for building new nuclear plants.

As the world's leading generator of nuclear power, with a unique position in Europe, and a strong presence on the four main markets, the Group believes itself to be ideally positioned to benefit from this situation.

The Group's ambition is to position itself as an energy leader, with the priority objective to invest for a lasting industrial growth, based on the skills development and the valorization of technical know-how in France and abroad.

The Group's investments are focused on the following three areas:
- reinforcement of its European leadership and long-term competitive advantages;
- promotion of energy efficiency, renewable sources, and environmentally efficient technologies;
- achievement of a leading role in the global revival of nuclear energy.

Furthermore, the Group seeks to develop partnerships and operational cooperation to contribute to the achievement of its priorities.

## 6.1.1 Reinforce its European leadership and long-term competitive advantages

### 6.1.1.1 IN FRANCE

In France, the EDF group pursues four objectives:
- provide new competitive and carbon-based energy product offerings to its customers, including gas and services (see section 6.2.1.2.2.2 ("Activity by market"));
- continue its efforts to adapt and modernize its electricity generation fleet, by improving its performance and increasing its useful operating life:
  – in the fossil-fired energy sector, EDF is thereby strengthening its peak and mid-merit generation capacity: it plans to put nearly 1,000 MW into service over the next three years;
  – with regard to its hydroelectric activity: the competitive procurement of hydropower concessions represents an important challenge for which EDF is highly mobilized (see section 6.2.1.1.4.4 ("Current and future hydropower generation issues")). EDF also intends to maintain the quality of its hydroelectric generating capacity and pursue new projects;
  – EDF has launched an enhanced maintenance program for nuclear plants in order to (i) position itself to significantly extend the average operating life of its fleet beyond forty years, following the example of other nuclear operators worldwide (see section 6.2.1.1.3.5 ("Preparing for the future

1 Figures calculated according to the rules of accounting consolidation.

2 A customer may have two customer's accounts: one for electricity and one for gas.

3 Source: Cambridge Energy Research Associates.

of the nuclear fleet in France" – "A. Operating life of EDF's PWR installations")) and (ii) improve the operating performances of its power plants with the aim of increasing the availability rate of power plants to 85% in the medium-term;

- prepare to renew nuclear facilities and retain EDF's technological edge.

As regards baseload plants, EDF is preparing to renew its nuclear facilities by the construction of an EPR at Flamanville (1,600 MW – start-up scheduled in 2012 for a first marketable generation of electricity in 2013) and is carrying out studies in the context of building a second EPR in France at Penly, with the participation of other energy providers (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France" – "B. – The European Pressurized Water Reactor ("EPR") and associated challenges")).

- implement a policy of sustained investment in electricity networks.

In its regulated business, the Group aims to maintain its reputation as an exemplary and transparent operator.

With regard to its distribution business, the main issue is the quality of service offered to all network users. Therefore, a policy of sustained investment in its networks has been implemented by promoting innovative technology that generates electricity efficiency, in the context of strong growth of demand due to the rapid expansion of decentralized production. This is illustrated, for example, by the testing in two pilot zones of smart metering, prior to a possible deployment on a national scale.

In the transmission business, in addition to its commitment to extend the Very High Tension network in France, the EDF group is committed to interconnections to facilitate cross-border exchanges and increase supply safety. The Group is therefore encouraging the increased cooperation among transmission system operators (TSO) so as to accelerate the integration of regional and futures markets in Europe.

In 2009, the Group increased its operational investments in France by 38.5% compared to the previous year (see section 6.1.4.1 ("Investments in 2009") hereinafter).

In April 2009, the "Champsaur Commission" issued a certain number of proposals concerning the future organization of the electricity market in France[1] (see sections 6.2.1.2.1.2 ("The competition") and 6.5.4.5.2 ("Future regulations in France")). In line with this report, the Government has begun drafting a bill that was handed down to the French Council of State in late March, for final adoption by the Parliament announced by the end of the year 2010.

### 6.1.1.2 IN EUROPE

The EDF group wishes to consolidate its international presence, in furtherance of its activity in France.

At an international level, the EDF group will consolidate its leadership in Europe based on its current positions by strengthening the upstream-downstream balance of its subsidiaries and pursuing integration within the Group.

#### – UNITED KINGDOM

Following the acquisition of the "British Energy" group by the EDF group in 2009, EDF Energy is implementing the integration announced by the Group at the time of this operation. In addition, EDF Energy is currently aiming to obtain an extension of the operating lives of its existing nuclear power plants (see section 6.3.1.1.2.3 ("Existing nuclear business unit")) and to play a leading role in the development of new nuclear power plants in the United Kingdom.

Furthermore, in October 2009 the EDF group initiated a process to evaluate ownership options for its UK electricity distribution networks. The process is ongoing and the Board of Directors should decide during the second quarter of 2010.

#### – GERMANY

EDF is supporting the growth of EnBW in Germany. In particular, in 2009 EnBW strengthened its asset portfolio following the acquisition of shares held by E.ON in the fossil-fired power plants at Lippendorf and Bexbach and agreements signed by EDF, E.ON and EnBW concerning the exchange of nuclear drawing rights and generation assets. The acquisition of 26% of EWE (group of services to local authorities, with presence in Poland and Turkey) by EnBW, concluded on July 21, 2009, also contributes to this strategy. In addition, a project for the acquisition of 47.89% of the gas provider VNG is currently under study.

#### – ITALY

The EDF group is supporting the reinforcement of Edison's business model that is based chiefly on safeguarding gas supplies, improving upstream/downstream balance by acquiring market share downstream, as well as its international expansion (see section 6.3.1.3.1 ("Edison")).

The Italian Government's decision to reinvest in nuclear power represents a major event. The Group proposes to contribute to this new dynamic revival along with the other key actors involved (see section 6.1.3 ("Be a major player in the global revival of nuclear energy")). In this context, the EDF group and Enel created a 50/50 joint venture company in order to carry out feasibility studies for the development of future EPR-type nuclear reactors on Italy (see section 6.3.1.3.3 ("Nuclear renewal in Italy")).

#### – BENELUX

Following the acquisition closed in November 2009 of 51% of the capital of SPE in Belgium, and the putting into service at the end of 2009 of the SLOE CCG power station in the Netherlands (see section 6.3.1.4.2 ("Benelux")), the Group aims to create a strong position in Benelux, a neighboring market of France at the heart of Europe.

#### – CENTRAL AND EASTERN EUROPEAN COUNTRIES (CEEC)

These countries, particularly Poland, have significant development potential for the Group.

#### – SWITZERLAND

In January 2009, the Group strengthened its position in Switzerland through its holding in the company Alpiq Holding SA (see section 6.3.1.4.3 ("Switzerland")).

### 6.1.1.3 GAS

The Group intends to continue to build its gas positions, necessary to its ambition to become an active energy provider in the gas sector in Europe as it is in the electricity sector, in order to secure its offer, propose a multi-energy offer to its clients and ensure the competitive supply of the Group's electricity generation tools that use gas.

1 Source: Commission report on organizing the electricity market, chaired by Paul Champsaur, April 2009.

In the area comprising France, the United Kingdom, Germany, Belgium and Italy, the Group's target is to have an average market share of 15% in terms of gas volume sales to end users. The Group therefore wants to increase its portfolio of gas purchase agreements, and its interests in gas reserves as well as logistical infrastructure, either by investing or by reserving contractual rights.

This strategy is thus implemented through projects and operations managed by Edison in southeastern Europe, such as the gas pipeline infrastructure project linking Italy to Greece and Greece to Bulgaria, the putting into service of the Rovigo offshore gas carrier terminal ("Adriatic LNG") in 2009 or the acquisition of exploration/generation holdings in the Egyptian Abu Qir gas fields. EDF acquired stakes in British North Sea gas fields from ATP Oil & Gas Corporation, and is considering a proposed LNG terminal in Dunkirk. In addition, EDF has signed a framework agreement with Gazprom, opening the opportunity for EDF to participate in the construction of the underwater section of the South Stream gas pipeline. Finally, the Group is studying projects for gas storage in Europe (see section 6.4.2 ("Natural gas businesses")).

#### 6.1.1.4 PROGRAM FOR IMPROVEMENT OF OPERATIONAL PERFORMANCE

The improvement of the operational performance via the success of the program "Excellence Opérationnelle" is a priority for the whole Group. For 2008-2010, the Group's goal is to reach a gain of €1 billion on the Group's 2010 EBITDA compared to that of 2007. A gain of €680 million was already realized in 2008-2009 (see section 12.1 ("Performance improvement: the *"Excellence Operationnelle"* program")).

## 6.1.2 Promote energy efficiency, renewable sources, and environmentally efficient technologies

The European climate policy and the "*Grenelle de l'Environnement*" in France, with its "50 measures for renewable energy" have created a very ambitious framework.

EDF is particularly active with regard to:

- the downstream energy efficiency: the EDF group's target is to be the leader in efficient energy solutions. In France, EDF aims to increase each year the number of customers subscribing to energy management and decentralized renewable sources offers or services, and produce energy saving certificates by its actions with clients. The Group is offering solutions to the European markets for managing energy consumption and developing innovative energy solutions. It is also developing product offerings based on energy management and encourages the development of multi-source energy as an integral part of buildings (photovoltaics, heat pumps, etc.) via its subsidiary EDF Énergies Nouvelles Réparties. Moreover, the Group aims to promote the development and future commercialisation of electric vehicles ("VE") and rechargeable hybrids ("VHR") (see section 6.2.1.2.2.2 ("Activity by market"), C. ("Market of local authorities and social lessors – promotion of electric vehicles"));
- the development of centralized production of renewable energy: this is a major focus of growth for the EDF group, and contributes to a low $CO_2$-emitting energy mix. The Group intends to continue this development, in particular via its subsidiary EDF Énergies Nouvelles. which intends, either alone or in partnership, to increase its installed capacities in renewable energy in order to reach (excluding hydropower) 4,200 MW in 2012, principally in wind energy, but also in solar energy (500 MWc). EDF also decided to install a series of wind farms in Brittany by 2011. Offshore wind power developments are also under consideration;
- the coal technologies: the EDF group also aims to make the most of opportunities that arise, in Europe and worldwide, from the newest technology: supercritical coal-fired power plants in China, like the one in Sanmenxia in which EDF took a stake of 35% in June 2009. The Group also wants to contribute to perfecting capture, transportation and storage technologies ("CCS: $CO_2$ Carbon Capture & Sequestration");
- exploration of large hydroelectric infrastructures projects which are part of a local policy of sustainable development.

## 6.1.3 Be a major player in the global revival of nuclear energy

As the world leader in nuclear power, the Group possesses significant strengths (operator of the world's largest nuclear capacity, engineering, recognized expertise of architect assembler etc.) in its pursuit of the objective of international growth in an environment which is currently becoming more favorable to this technology.

With respect to strategic partnerships, the EDF group aims to (i) invest in about ten nuclear power plants projects by 2020, in France and abroad, (ii) to participate in their construction and commissioning, and then (iii) to operate them. The aim of these partnerships is notably to share the risks and costs associated with the projects.

The countries identified to date are:

- France: EDF is currently lead contractor for the construction of Flamanville 3 EPR, and is developing the project of Penly 3, for which discussions are underway in order to associate major European energy companies;
- United Kingdom: following the acquisition by the EDF group of British Energy in January 2009 (see section 6.3.1.1.1 ("Introduction")), the Group is in a strong position to play a leading a role in the revival of nuclear energy in the United Kingdom. The Group's ambition is to construct 4 EPR-type reactors in the United Kingdom, the first of which should be put into service before the end of 2017;
- United States: in 2007, the EDF group and Constellation Energy Group ("CEG") concluded a strategic partnership ("UniStar Nuclear Energy 50/50 Joint venture") to jointly design, build, own, and operate in the United States EPR-type nuclear power plants (see section 6.3.2.2 ("UniStar Nuclear Energy")). Furthermore, in November 2009 the Group finalized the acquisition of 49.99% of CEG's nuclear generation and operation activities for approximately $4.65 billion *i.e.,* €3.1 billion, (€0.7 billion of which paid in 2008) (see section 6.3.2.3 ("Acquisition of 49.99% of CEG's nuclear assets")). This acquisition supports the EDF group's role as a major actor in the revival of nuclear energy in the United States. The first EPR project proposed by Unistar Nuclear Energy is that of Calvert Cliff 3;

- China: the transaction contemplated by the agreement signed in November 2007 with the China Guangdong Nuclear Power Corp. ("CGNPC") was completed on December 21, 2009 through the creation of the Taishan Nuclear Power Joint Venture Company (TNPJVC), 30% owned by the EDF group, after the approval on December 11, 2009 by the Chinese Ministry of Commerce ("MOFCOM") of the joint venture agreements. The first reactor should be put into service at the end of 2013 and the second in 2014 in Taishan, which is located in the province of Guangdong. Following the approval of the project by the Chinese Government in October 2009, the construction of the first nuclear island of the Taishan power plant began with the first pouring of concrete;
- Italy: in the context of the framework agreement signed between France and Italy at the Franco-Italian summit of February 24, 2009 concerning the collaboration between the two countries with regard to nuclear power, the EDF group and Enel signed an agreement providing for a consortium owned at parity by EDF and Enel to look into the feasibility of developing at least 4 nuclear reactors based on EPR technology in Italy. This agreement was realized in August 2009 with the creation of the "Sviluppo Nucleare Italia" (see section 6.3.1.3.3 ("Nuclear renewal in Italy"));
- other countries:
  - Poland: on November 17, 2009, EDF and PGE, the leading Polish electricity supplier, signed a draft agreement to launch a cooperation in the nuclear energy sector: carrying out of feasibility studies for the development of EPR-type reactors in Poland and the objective of constructing the first EPR in Poland before the end of 2020 (see section 6.3.1.4.1.1 ("Poland"));
  - The Republic of South Africa: due notably to the global financial crisis in 2008, the South African public electricity provider Eskom decided to defer its project for the construction of two nuclear reactors.

## 6.1.4 Investment policy

### 6.1.4.1 INVESTMENTS IN 2009

The EDF group committed a net disbursed sum of €14.7 billion to external growth operations, notably with the final phase of the acquisition of British Energy completed in 2009 (€8.4 billion disbursed in 2009 after taking into account the disposal to Centrica of 20% of the interests in British Energy for €2.5 billion), and the finalization of the acquisition in November 2009 of 49.99% of CEG's nuclear generation and operation activities for €2.4 billion, and the acquisition of 51% of SPE for €1.3 billion (see section 9.8.1.2 ("Net cash flow used in investing activities")).

The Group also continued its program of operational investments, for a sum of €12.4 billion in 2009, compared to €9.7 billion in 2008.

In France, (the segment "France" does not include the French subsidiaries of the Group, other than the regulated subsidiaries, in particular EDF Énergies Nouvelles and Dalkia, see section 9.5 ("Segment reporting of financial information")), the Group invested a total of €7.2 billion, including €0.5 billion in insular activities, €3.3 billion in generation activities and €3.4 billion in networks.

International operational investments amounted to €3.6 billion including nearly €2.2 billion for the United Kingdom, approximately €0.6 billion for Germany and €0.5 billion for Italy.

Operational investments in the Other Activities (including EDF Énergies Nouvelles, EDF Trading and Dalkia) amounted to €1.6 billion.

### 6.1.4.2 INVESTMENTS IN 2010

Assuming the same scope as at the end of 2009, the Group should invest in 2010 an amount of approximately €13 billion in net operational investments.

### 6.1.4.3 INVESTMENTS IN THE NEW NUCLEAR PROGRAM BY 2020

The Group aims in the coming years to develop and operate, in the context of partnerships, a significant number of nuclear power plants using the EPR technology, both in France and abroad.

The financing of this important development during the coming years will depend on co-financing by partners, the use of non-recourse financings or similar type of financings, as well as on the financial resources generated by the operation of these new power plants. EDF's financial contribution to these investments will be gradual.

# 6.2 Presentation of the EDF group's activity in France

## 6.2.1 Deregulated activities in France

The deregulated activities of EDF in France (activities open to competition), include the generation and supply of electricity. EDF is implementing an integrated model for the joint operational management of its portfolio of assets upstream (generation and procurement of energy and fuels) and downstream (wholesale and retail) to guarantee supply to its customers through the best possible management of operational and market risks and with a view to maximizing gross margin.

### 6.2.1.1 ELECTRICITY GENERATION

EDF groups together its main electricity generation activities in France within its Generation and Engineering Division which has all of the skills and performance levers necessary to operate the largest European electricity generation fleet and to manage its development and continuity.

As of December 31, 2009, the Generation and Engineering Division had 33,975[1] employees. It is organized around three major areas: nuclear power, hydropower and fossil-fired power.

In addition, its engineering department provides technical and industrial skills to the entire Group in all three areas: the nuclear power, the hydropower, and the fossil-fired power (see section 6.3 ("Presentation of the EDF group's international activity") below).

#### 6.2.1.1.1 GENERAL PRESENTATION OF EDF'S GENERATION FLEET

##### *6.2.1.1.1.1* Composition and characteristics of the installed capacity

With a total installed capacity of 96.8 GW in mainland France[2] as of December 31, 2009, EDF has the largest generation fleet in Europe, accounting for approximately 14.5% of the total installed capacity of the main countries of continental Europe (the 24 countries having members of the UCTE – Union for the Coordination of Transmission of Electricity – which includes, in particular, Germany, Italy and Spain).

In 2009, EDF's generation facilities represented 447.7 TWh.

As of December 31, 2009, the capacity of EDF's generation fleet in mainland France was as follows:

- 58 nuclear units based on pressurized water reactors ("PWR") (a unit is defined as a generation unit including a reactor, steam generators, a turbine, a generator and the related equipment): these units are spread out over 19 sites; 34 units have a power capacity of 900 MW each, 20 units have a power capacity of 1,300 MW each, and 4 units have a power capacity of nearly 1,500 MW each; the average age of the units is 24 years[3] (between 8 and 32 years);
- 33 functioning fossil-fired units, with those in service having an average age of approximately 30 years; in addition, 8 units under guaranteed multi-year shutdown[4];
- 447 hydropower plants with an average age of over 60 years[5];

There were also:

- the wind power generation capacity of EDF Énergies Nouvelles in France (see section 6.4.1.1.2 ("EDF Énergies Nouvelles") below) and the incineration plants of the Tiru Group (see section 6.4.1.2 ("Tiru") below); and
- 69 hydropower plants attached to the operational perimeter of the Generation/Engineering Division but held by the Group's subsidiaries: SHEMA (100%), FHYM (69.7% since January 8, 2008), representing a total of 73 MW of installed capacity in 2009 and 238 GWh generation capability.

##### *6.2.1.1.1.2* Evolution of the installed capacity and generation over the last three years

The table below shows the evolution of the fleet's installed capacity over the last three years:

| *Installed Capacity*[(1)] | As of December 31, 2007 In MW | % | As of December 31, 2008 In MW | % | As of December 31, 2009 In MW | % |
|---|---|---|---|---|---|---|
| Nuclear power | 63,130 | 65 | 63,130 | 65 | 63,130 | 65 |
| Hydropower[(2)] | 20,069 | 21 | 20,066 | 21 | 20,008 | 21 |
| Fossil-fired[(3)] | 13,032 | 14 | 13,407 | 14 | 13,642 | 14 |
| **TOTAL** | **96,231** | **100** | **96,615[4]** | **100** | **96,792[4]** | **100** |

*(1) Expressed in MW of power connected to the network.*

*(2) Excluding Corsica and the French Overseas departments, 400 MW in 2009.*

*(3) Excluding Corsica and the French Overseas departments, 1,487 MW in 2009, and including 2,195 MW of units under guaranteed multi-year shutdown.*

*(4) This value also includes 12 MW of capacity of wind generation.*

1 A decrease of 2,134 employees compared to 2008. This decrease results mainly from the creation of the *Services Partagés* Division on January 1, 2009, which allows the pooling within EDF of certain support activities (accounting, IT, management of employment contracts, etc.).

2 For Corsica and French Overseas departments, see section 6.2.2.3 ("Island Energy Systems").

3 Arithmetic mean based on industrial commissioning.

4 The generation facilities under "guaranteed multi-year shutdown" are awaiting a decision of reactivation or operation withdrawal.

5 Arithmetic mean.

The table below shows the evolution of the generation from EDF's installed capacity over the last three years:

| *Generation* | As of December 31, 2007 In TWh | % | As of December 31, 2008 In TWh | % | As of December 31, 2009 In TWh | % |
|---|---|---|---|---|---|---|
| Nuclear power | 418.0 | 88 | 417.6 | 87.3 | 389.8 | 87.1 |
| Hydropower[1][3] | 41.2 | 8 | 44.8 | 9.4 | 41.9 | 9.4 |
| Fossil-fired[2] | 18.2 | 4 | 15.8 | 3.3 | 16.0 | 3.6 |
| **TOTAL[4]** | **477.5** | **100** | **478.3** | **100** | **447.7** | **100** |

*(1) Excluding Corsica and the French Overseas departments, 1.3 TWh in 2009.*

*(2) Excluding Corsica and the French Overseas departments, 4.6 TWh in 2009.*

*(3) Total hydraulic generation: the electricity consumption needed for the operation of pumped storage plants amounted to 6.8 TWh in 2009, resulting to a net hydraulic generation (given the pumped storage consumption) of 35.1 TWh.*

*(4) These values correspond to the sum of the precise values, corrected to one decimal place.*

### 6.2.1.1.2 STRENGTHS OF THE GENERATION FACILITIES' FLEET

With a total installed capacity of 96.8 GW as of December 31, 2009 in mainland France, EDF has the largest fleet of generation facilities in Europe. This fleet has significant assets:

- **a competitive generation mix with low variable generation costs and limited exposure to hydrocarbon market fluctuations due to nuclear and hydropower facilities;**
- **a variety of generation means enabling adequate coverage of EDF's downstream portfolio needs (end users, VPP, sales to alternative suppliers, sales on the wholesale markets, etc.).** Utilization of the fleet's various components is managed by giving priority, at any given time, to the generation type offering the lowest variable costs. Run-of-river hydropower plants are used for base generation. Nuclear plants, because of their low variable generation costs, are used for baseload and mid-merit generation. Adjustable hydropower generation (coming from dams) and fossil-fired plants are used for mid-merit and peak generation;
- **a significant standardized fleet of nuclear facilities; which EDF provides full control over their entire life cycle.** Moreover, EDF is working towards extending the operating life of its power plants and improving their technical performances;
- **a fleet generating at over 95% without $CO_2$ emissions** owing to the predominance of nuclear and hydropower generation facilities, in an increasingly restrictive environmental regulatory context; and
- **a geographical position at the junction of electricity exchanges between the continental platform and the electric peninsulas** (Italy, Spain, the United Kingdom).

### 6.2.1.1.3 NUCLEAR GENERATION

The electricity generated by EDF from its fleet of nuclear power plants represents, as of December 31, 2009, 87.1% of its total electricity generation. The characteristics of this fleet are set forth below.

#### *6.2.1.1.3.1* EDF's nuclear fleet

EDF's PWR model is divided into three series of available electrical power:

- 900 MW series consisting of 34 units of approximately 900 MW (i.e., a total power capacity of 30,770 MW);
- 1,300 MW series consisting of 20 units of approximately 1,300 MW (i.e., a total power capacity of 26,370 MW); and
- N4 series, the newest, consisting of 4 units of approximately 1,500 MW (i.e., a total power capacity of 5,990 MW);

totaling 58 units in service spread over 19 sites, with a total installed capacity of 63,130 MW as of December 31, 2009.

The first unit of the 900 MW series power plant was commissioned at Fessenheim in 1978. The most recent unit was commissioned at Civaux in 2002. EDF's nuclear fleet is one of the youngest in the world, with an average age of approximately 24 years for an estimated technical operating life in excess of 40 years.

The distribution of units by age is as follows:

- 4 units have been in service for less than 10 years;
- 6 units have been in service for between 15 and 20 years;
- 20 units have been in service for between 20 and 25 years;
- 23 units have been in service for between 25 and 30 years; and
- 5 units have been in service for over 30 years (the oldest being 32 years old).

EDF owns nuclear facilities' sites, which is an advantage when it comes to the renewal of its fleet, because EDF already has the sites needed to build new units.

The EDF power plants of the first-generation technology have been gradually shutdown and are being decommissioned.

#### *Generation allocation contracts*

EDF has developed an industrial cooperation with European operators in the nuclear industry, in the form of generation allocation contracts related to units of EDF's French nuclear fleet. Thus, EDF's fleet includes 11 generation units (currently up to 1.4 GW, evolving to 1.6 GW with the start-up of Flamanville 3) with the following European electricity companies:

- Fessenheim 1-2: EnBW (17.5%) and the consortium of Swiss electricity companies, CNP (15%); from January 1, 2010, E.ON acquires access to the equivalent of the drawing rights of EnBW on this power plant;
- Cattenom 1-2: EnBW (5%); from January 1, 2010, E.ON acquires access to the equivalent of the drawing rights of EnBW on this power plant;

On September 30, 2009, EDF, E.ON and EnBW signed agreements regarding swaps of electricity drawing rights and generation assets between France and Germany. E.ON acquires access to the equivalent of the drawing rights of EnBW on EDF's nuclear generation, from January 1, 2010 (see section 6.3.1.2.3.1 ("Electricity businesses")). However, EnBW remains the holder of the generation allocation contracts entered into with EDF.

- Bugey 2-3: Électricité de Laufenbourg in Switzerland (17.5%);
- Tricastin 1 to 4: Electrabel (12.5%);
- Flamanville 3 under construction: Enel (12.5%) (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France") for the industrial partnership agreement signed with Enel on November 30, 2007).

The purpose of these generation allocation contracts, for each unit concerned, is to make available to each partner the proportion of energy

generated which is actually due to them in return for payment of their share of the construction costs, annual operating costs (including the upstream and downstream fuel costs), local taxes and taxes specific to nuclear energy, and the costs relating to decommissioning. In these operations, the partners shared the industrial risks with EDF during the development of the power plants (involving three firsts-of-a-kind) and assume the risks associated with the operation of the power plants. They have, however, no operational role.

Furthermore, EDF signed a second type of generation allocation contract (for a total of approximately 2 GW) enabling its partners to benefit from a proportion of electricity generation from a given fleet. These contracts mainly concern the following power plants:

- Chooz B1-B2 (first-of-a-kind N4): Electrabel (21.67%) and the Belgian company SPE (3.3%);
- Cattenom 3-4: Électricité de Laufenbourg in Switzerland (7.8%) and the consortium of Swiss electricity companies CNP (21.8%).

### *6.2.1.1.3.2* Environment, safety and radiation protection

#### *A. Environmental safety*

EDF is making great efforts to reduce the volume and the environmental impact of the liquid and gas emissions by its nuclear power plants. From 1990 to 2002, while already much lower than the regulatory limits, EDF reduced its radioactive liquid emissions by a factor of 30 (excluding tritium and carbon-14). The level of liquid emissions was again cut in half between 2002 and 2009, and is now at a very low limit.

With regards to the management of operating low and medium activity waste ("FAMA" waste), steps have been taken to limit its storage on all nuclear sites. In addition, since 2004, very low-level waste ("TFA") is sent to the very low-level waste storage center of the French National Agency for the Management of Radioactive Waste *(Agence nationale pour la gestion des déchets radioactifs,* or ANDRA*)* at Morvilliers.

For a description of nuclear waste processing downstream of the cycle as well as decommissioning, see sections 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues – B. Back-end") and (6.2.1.1.3.6 "Decommissioning of nuclear power plants"), below.

An ISO 14001 certification procedure (see section 6.4.3.1.2 ("Tools for implementing sustainable development") below) was undertaken in 2002 for all units of the Nuclear Operations Division. In 2004, all of the units were certified. The certification was renewed in 2005 and 2008.

Under the authority of the French NSA, a National Network measuring environmental radioactivity is being established, with the aim of synthesizing the results of measurements of environmental radioactivity, and ensuring the quality of these measures. The regulatory measurements of environmental radioactivity around nuclear power plants are accessible to the public since January 2010 on the website *www.mesure-radioactivite.fr.*

#### *B. A global nuclear safety policy*

EDF, in its capacity as a nuclear operator, assumes responsibility for nuclear safety and reaffirms nuclear safety as its main priority in a framework of constant evolution (market competition, environmental issues, etc.).

The implementation of the French nuclear electricity program led EDF to establish safety measures which:

- take into account, from the design stage, the risks that might arise during the operation of the power plants, whether relating to the actual operation of the installations or to internal or external attacks;
- are based both on the application of strict rules of operation, and on the cautious and inquiring attitude of the technical teams by means of the establishment of a true safety culture;
- are based on the cumulative experience of a standardized fleet of 58 reactors (i.e., almost 1,400 reactor years of operation (arithmetic sum of years of operation of EDF's PWR plants));
- benefit from integrated nuclear engineering and R&D within the Group in order to anticipate the correction of failures, maintain the installations in good working order, develop materials/equipment on an ongoing basis, reassess safety margins, monitor technology advances as well as the implementation of more effective new technologies and the managing of decommissioned sites;
- rely strongly on the development of skills; with this objective in mind, each nuclear generation site is equipped with a global simulator used for training to cope with any type of situation.

Nuclear safety is subject to numerous controls, both internal and external. The external control of the safety of nuclear facilities in France is carried out by the French NSA.

EDF is subject to the following external audits:

- at the national level:
  - regulatory inspections carried out on sites by NSA, randomly or on a scheduled basis (approximately 400 inspections per year);
  - a safety re-examination process conducted on a 10-year basis has also been in place since 1990. It aims to improve the compliance of operating nuclear plants with safety standards, and to reassess these standards based on feedback and new knowledge. The safety standards reassessed in this way are then set until the next re-examination. The objectives are established by the NSA (which monitors compliance) while EDF proposes solutions to meet them, implementing them after obtaining the approval of the NSA. A safety re-examination was undertaken in the context of the second and third 10-year inspections of the 900 MW plants, second 10-year inspections of the 1,300 MW plants and first 10-year inspections fot the N4 plants. At the end of 2009, the second set of 10-year inspections had been completed for 33 out of the 34 plants in the 900 MW series, and 12 out of the 20 plants in the 1,300 MW series. In 2009, the first 10-year inspection was completed for a N4 plant (out of 4). Concerning the third 10-year inspections of the 900 MW plants, see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France");
  - the 10-year safety re-examination is an important step in extending the operating life of power plants (see section 6.5.4.2 ("Specific regulations applicable to nuclear facilities") below).
- at the international level, regular inspections are held making it possible to benefit from the experience gained worldwide:
  - the OSART (Operational Safety Review Team) of the IAEA (International Atomic Energy Agency) performs reviews at the request of the NSA with the objective of formulating recommendations and promoting good working practices; and
  - the international Peer Review inspections carried out by WANO (World Association of Nuclear Operators) and organized at the request of EDF perform the assessment of safety performance and also help promote best international working practices.

EDF has also implemented internal audit procedures, such as:

- every three to four years, EDF performs overall safety assessments for each power plant, which take place over a three-week period and involve approximately 30 inspectors;
- the General Inspector for nuclear safety and radiation protection, reporting to and appointed by EDF's Chairman, performs audits to assess the overall safety of the nuclear fleet on an annual basis and to suggest improvements to the company's management.

In relation to the condition of its facilities, EDF intends to reach a level comparable to the best international operators, which requires continued improvement of behavior and practices on maintenance sites, as well as

investments focused on the renovation of premises and equipment. At the end of 2006, a program specially developed to improve the conditions of the facilities (*"Obtenir un état exemplaire des installations"*) was implemented in order to bring all nuclear sites up to the best international standards regarding the running of facilities. This investment and maintenance program involves an investment of around €600 million between 2006 and 2011. Efforts made by EDF, notably in order to improve human performance, have enabled a reduction over the last few years of the annual average number of Automatic Reactor Trips (ART)[1] at a rate of less than one per unit[2]. 2009, with 41 ART, 2009 is lower than the performance recorded in 2008 (31 ART) but remains the second best historic performance.

EDF is subject to the law of June 13, 2006 relating to nuclear transparency and safety (see section 6.5 ("Legislative and regulatory environment")). This law guarantees access to information concerning health and the environment to all individuals, and formalizes transparency on nuclear safety.

### *C. Warning system*

In the event of an accident, a crisis plan is in place to limit impacts on the environment and on people. To ensure the safety of the installation and the protection of people, the system is based on two closely coordinated plans, designed for both local and national use. These are the Internal Emergency Plan (*Plan d'Urgence Interne, or PUI*), prepared by EDF, and the Special Intervention Plan (*Plan Particulier d'Intervention*, or PPI), prepared by French prefectures in collaboration with the French State and EDF. In order to provide greater effectiveness and thus, improved protection of people, these plans account for the risk of malicious mischief.

The relevance of the system for warning, informing and protecting people is regularly assessed through accident simulation exercises, which make it possible not only to ensure the correct operation of the crisis plan, but also to improve upon it, in particular, by clarifying roles and validating all of the required physical and human resources. Each year, approximately 100 exercises are organized for the entire French nuclear fleet, i.e., approximately one drill every three days. Approximately 10 exercises are on a national level, under the management of the NSA and involve EDF and the public authorities, in particular the *préfectures*.

### *D. Major events concerning safety*

Events are classified on a scale of 1 to 7 on the INES scale (International Nuclear Event Scale), with 7 being the most serious. Those of no consequence for nuclear safety are classified as discrepancies or level 0 events.

Since the establishment of a scale of this kind in France in 1987, no level 3 event (serious incident – very low external emission, and exposure of the public representing a fraction of the regulatory limits) or above has occurred regarding the French nuclear fleet.

From 2002 to 2008, for its entire fleet, EDF recorded a yearly total of approximately one level 2 event (incident provoking major breach of safety regulations and/or significant contamination or over-exposure of a worker). Each year, EDF handles an average of one level 1 event per reactor (non-compliance with the approved rules of operation occurring due to equipment failure, human error or shortcomings in the procedures).

In 2009, a level 2 event in the safety field[3] was recorded: on December 2, 2009, following heavy rains, the water intake feeding the cooling system of the generation unit of the Cruas-Meysse plant was blocked with vegetal waste. As a precaution, the management of the plant stopped the production unit concerned. With teams and technical resources mobilized the cooling system of the unit was restored a few hours later. At all times, the plant's safety was ensured and this event had no impact on the environment. This event did not result from a failure of the operator.

The average number of level 1 events in 2009 was 1.2 per reactor and the average number of non-classified events (level 0) was 9.3 per reactor.

Overall safety results over the past five years are stable and there is a significant improvement of key indicators for operation safety.

### *E. Radiation protection*

The mobilization of all actors has enabled the continuous improvement of performance in terms of protecting personnel from the effects of ionizing radiation. Thus, the average annual collective dose of all workers, both employees of EDF and outside companies intervening in power plants, has been halved in less than 10 years. In 2009, the average collective dose was 0.69 man-sieverts (mSv) per reactor per year, which is a comparable level to the average values recorded by German, Japanese and American operators for reactors using the same technology, i.e., pressurized water. This result, similar to the 2008 result (0.66 man-sieverts), should be assessed taking into account the volume and the duration of maintenance work during the shutdowns of the units, higher than in 2008.

EDF continues its efforts to lower the number of individual doses of exposure to radiation below the regulatory limit. Accordingly, in 2009, the number of workers, whether from EDF or an outside company, having received a cumulative dose over 12 months of between 16 and 20 mSv (annual regulatory limit) reached a maximum of 10 in January 2009 (14 in 2008, 20 in 2007), and this number varies between 2 and 10 people over 12 rolling months; none of these doses were over 18 mSv.

In 2009, the END Company, a member of the Horus Group, one of EDF's contractors, recorded to the NSA, in accordance with regulations, a level 2 significant event in the radiation protection field which occurred during a radiography check. An employee of an outside company who was conducting inspections of welding was exposed to a dosimetry of 4.8 mSv, less than a quarter of the annual regulatory dose. His personal protective equipment together with the rapid response of his colleagues helped to limit the employee's exposure time. At the request of EDF, the company employing the employee established security provisions for additional training for its employees. This action plan was submitted to EDF as well as the NSA who were satisfied. EDF has also shared this information with all outside companies that carry out this type of activity in order to prevent a recurrence of this type of event.

In the coming years, given the levels already achieved, efforts will have to be focused on power plants with the worst dosimetric results, in particular by cleaning their circuits.

Continued improvement in radiation protection involves raising the quality of the radiation protection culture to the same level as the safety culture.

1 Automatic and instantaneous shutdown of the plant by starting up protective measures to ensure its safety.

2 For 7,000 hours of criticality.

3 A significant level 2 event was recorded in the radiation protection field (see section 6.2.1.1.3.2-E ("Radiation protection")).

### *6.2.1.1.3.3* Performance of the nuclear fleet

The nuclear generation variable cost, mainly made up by the fuel costs, is low since it represents less than 30% of operating costs[1]. Therefore, the main competitive levers of the nuclear fleet are the amount of generated energy and the optimization of fixed operating costs. The levers relating to the fuel cycle are further discussed in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"). All things being equal, EDF is seeking to increase its nuclear-generated production and to cut its non-fuel operating costs.

#### *A. Operation methods of the nuclear fleet*

*Generation cycle*

PWR facilities alternate between cycles of 12 or 18 months of production and shutdowns so that part of the fuel charged into the core can be replaced and necessary maintenance work can be carried out.

At the end of each generation cycle, there is an alternating between two types of programmed shutdowns:
- an ordinary shutdown for refueling only (*Arrêt pour Simple Rechargement,* or "ASR"), during which unloading spent fuel and refueling fresh fuel is the main operation performed, although light maintenance or periodic testing may also take place in addition to the refueling. The reference duration of shutdown is around 35 days;
- a partial inspection for refueling and maintenance, the reference duration of which is 55 days.

Every ten years, the power plant is shut down for an average of about 90 days in order to carry out a 10-year inspection, during which EDF carries out an in-depth examination of the main components.

*Operation of EDF's nuclear fleet*

Owing to their low variable cost, nuclear generation means are first and foremost used as base-load generation means, after the run-of-river hydropower, the other renewable energies and the energy bought under the purchase obligations from the decentralized electricity generators. The variations in consumption of EDF's final customers during one year (summer-winter, day-night) and the current restrictions in fluidity of the wholesale markets due to limited interconnections, lead to nuclear power also being used for mid-merit generation. Strong variations in seasonal consumption in France and variations in levels of consumption during the winter months (a drop in temperature of 1°C in winter entails a rise in electricity consumption in France which can reach 2,100 MW (source: RTE-EDF Transport), require that nuclear fleet shutdowns be concentrated between April and October. Following the 2003 heat wave, the unit shutdown schedule was modified to reduce the number of shutdowns in July and August and maximize the operation of seaside units, the cooling capacities of which are independent of climatic conditions.

In order to reconcile those issues concerning the strong variations in seasonal consumption in France, the availability of power plant units, and the efficient use of reactor fuel, EDF has now adopted normative operating cycles of 12 and 18 months for its fleet. At the end of 2009, they were divided as follows:
- 28 units of the 900 MW series have an operating cycle of 12 months;
- 6 units of the 900 MW series and the 20 units of the 1,300 MW series have an operating cycle of 18 months;
- the 4 N4 units (1,500 MW) have now an approximately 18-month operating cycle.

1 Operating costs are cash costs and are defined as follows: fuel costs (including back-end expenses in the fuel cycle), operating expenses (external services and purchases, employees) and maintenance costs (expenses and investments). They do not include investments related to construction, decommissioning expenses, or depreciation and provisions.

#### *B. Generation and technical performances*

The nuclear fleet's generation amounted to 390 TWh in 2009, a volume down 28 TWh (i.e., 6.7%) in comparison to that of 2008.

Nuclear generation expressed in annual energy corresponds to a load factor, Kp for the French nuclear fleet (defined as the generated energy compared to the maximum theoretical energy, the latter notion corresponding to the constant operation of the installed capacity throughout the year). This factor is obtained by multiplying two coefficients (Kp = KdxKu):
- the availability factor, Kd (the available energy[2] as a percent of the maximum energy that could be generated if the installed capacity was operated all year long);
- the utilization factor, Ku (the energy generated as a percent of the energy available). Ku is the reflection of environmental and social constraints, supply of system services, and optimization implemented by EDF (fuel and modulation).

The coefficient Kp, 70.7% in 2009, is significantly down compared to 2008 (75.3%). It results from a Kd of 78% in 2009, 1.2 point lower than in 2008 and from a Ku of 90.6%, down 4.6 points compared to 2008.

Compared to 2008, the change in output of 28 TWh is a result of:
- social unrest that have affected the campaign of unit shutdowns and explain a loss of nuclear generation of about 17 TWh throughout the year. Unlike 2008 during which the generation was not impacted by social conflicts, these movements have caused extensions of unit shutdowns in 2009, mostly in the second half of the year, and generation losses due to lower output;
- several cases of incidental or extra shutdowns, mainly occurring in the second half of 2009 and particularly related to failure of equipment (steam generators, alternators, transformers) the replacement of which was necessary and already programmed in part for 2010. Technical problems encountered this year on the steam generators, alternators and transformers respectively had an impact on the Kd of 2.6 points, 1.7 points and 0.5 points. These events lead to a generation loss of about 6 TWh;
- various losses caused by environmental factors: the shutdown at the Blayais plant during the first quarter of 2009 due to the presence of vegetal waste and mud plugs in the Gironde after the Klaus storm and the lower output at the Cruas-Meysse plant following the scaling of cooling towers in 2009 led to a generation loss of about 3 TWh;
- various factors of lower impact: the greater use of the modulation of power in 2009 and the leap year effect in 2008 (which automatically led to the loss of a day of generation in 2009) resulted in a generation loss of about 2 TWh.

The company's target Kd of 81% for 2009 was not reached. The target of an availability factor of 85% was judged in 2008 to be achievable in 2011. Today, in view notably of the extent of the technical problems encountered, a more detailed analysis has been carried out. For 2010, the target is an increase in the Kd between 1.5 and 2 points. The target Kd of 85% is maintained for the medium term.

In order to improve the availability factor, EDF has the following performance levers:
- technical levers:
  - switch the four units of the N4 series to operating cycles of approximately 18 months instead of 12 months, expected to be in full effect by 2010;
  - implementation of a curative and preventive policy relating to the technical problems mentioned above:

2 The available energy is equal to the maximum theoretical energy less losses for technical reasons inherent to power plants, such as planned shutdowns, unplanned outages due to failure or safety requirements, and regulatory tests.

– chemical cleaning of the steam generators of the 15 units covered by the clogging phenomenon: between 2007 and 2009, 12 units were processed and the 3 remaining unit shall undergo an operation of this type during the years 2010 and 2011;
– renovation of the alternators' stators in 48 units at risk of isolation : between 2006 and 2009, 17 alternators were renovated. The renovation program will continue at a rate of 5 or 6 stators per year. At the end of 2012, 35 out of the 48 concerned should have been renovated;
– preventive replacement of the poles of the main transformers. This will be achieved progressively, starting from 2010 the replacement of the most sensitive poles;
– preventive replacement of steam generators. EDF has developed a national replacements program of steam generators, switching from 1 to 2 units per year the rate of replacement starting from 2010: in 2009, steam generators of 1 unit have been changed. Between 1990 and 2009, 18 units have undergone this type of intervention;

- levers included in the *"Excellence Opérationnelle"* program and using best international practices:
  – reduction of the level of unplanned unavailability with the help of a standard measure of INPO (Institute of Nuclear Power Operations) of equipment reliability called AP913 and introduction of equipment health checks. This measure is initiated by a classification of components according to the consequences of their failure; the level of unplanned unavailablity has been noticeably reduced in the United States of America after approximately 4 years after its introduction;
  – reinforcement of the management of unit shutdowns in order to reduce the extensions of shutdown on the 2010-2012 period. This work is a prerequisite for the installation, over 3 years, on each site, of a Operating Centre for Continuous Management of Units Outages (COPAT). The aim of the COPAT is to reduce the average duration of shutdowns, by continued management of the shutdown's critical activities, and a reactive response to technical alerts.

The effects of these levers will however be tempered by heavier shutdown programs over the coming years due to an increased annual number of 10-year inspections and significant plants maintenance operations aiming to ensure a longer operating life for the power plants.

#### *6.2.1.1.3.4* The nuclear fuel cycle and related issues

The annual average volume of nuclear fuel consumed is approximately 1,200 tonnes (tonnes of heavy metal, enriched uranium and plutonium), including approximately 1,080 tonnes of $UO_2$ fuel (fluorinated and then enriched natural uranium 100 tonnes of MOX fuel (fuel generated from reprocessed plutonium) and 20 tonnes of URE fuel (re-enriched uranium).

The nuclear fuel cycle includes all of the industrial operations conducted in France and abroad which make it possible to deliver fuel for energy generation in the reactor, then to discharge and process it. The cycle is completed in three stages:

- front-end: the purchase of concentrates from uranium ore, the fluorination (or conversion), enrichment and fabrication of fuel assemblies;
- the heart of the cycle corresponding to the use of fuel in the reactor (three to five years): receipt, loading, operation and unloading; and
- back-end: storage in pool, processing of spent fuel, conditioning of radioactive waste and recycling of recoverable material, temporary storage of conditioned waste before long-term management, as provided for by law n° 2006-739 of June 28, 2006 concerning the long-term management of radioactive material and waste ("the law of June 28, 2006").

EDF ensures the coherence of all of the operations in the fuel cycle. Generally speaking, front-end and back-end operations are carried out by subcontractors and/or suppliers, generally on the basis of multi-year contracts. EDF carries out the heart of the cycle operations and acquires most of the raw materials as uranium concentrates ($U_3O_8$), transformations into more elaborate products being carried out by industrials through services contracts (fluorination, enrichment and realization). EDF owns in most cases and is responsible for the fuel and materials it uses throughout all the fuel cycle stages.

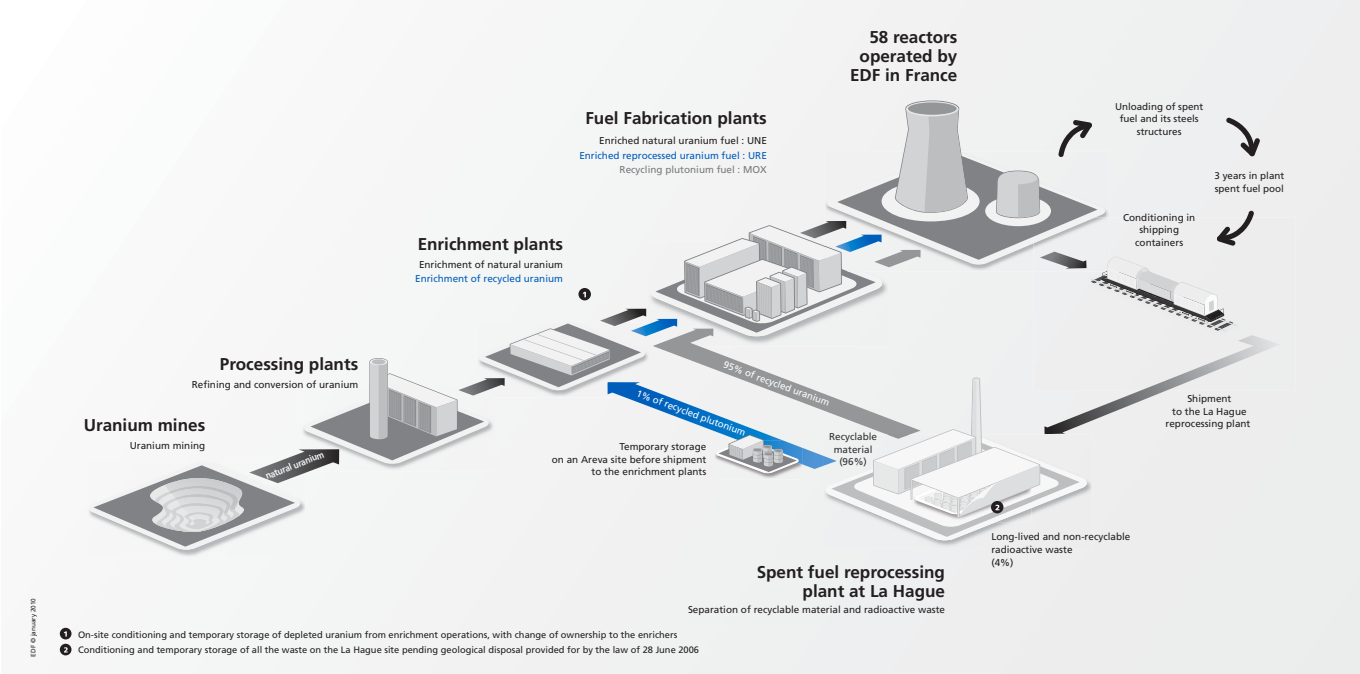
Following a recent media debate on EDF's recyclable uranium enrichment in Russia, in October 2009 the French Government and Parliament referred the matter to the High Committee for Transparency and Information on Nuclear safety (*Haut Comité pour la transparence et l'information sur la sécurité nucléaire* (HCTISN)) so it could hear the different stakeholders (Governments, NSA, manufacturers, associations, etc.), consider the case and make recommendations to improve public information on the nuclear fuel cycle and radioactive waste.

In response to a questionnaire established by the HCTISN, EDF has submitted a comprehensive report showing the cycle of nuclear fuel of EDF, explaining the diference between radioactive waste and nuclear material and explaining the principles use to ensure safety of supply (stocks, diversification). Other stakeholders have also provided evidence. The complete file is available on the HCTISN website.

The EDF report recalls three basic principles governing its management of the fuel cycle and radioactive waste:

- security of supply of EDF reactors with nuclear fuel requires a global access to uranium and connected processing services;
- the transportation of nuclear materials is organized according to international regulations, imports and exports in France are authorized and outlined by the Public Authorities;
- EDF's radioactive waste remains in France, where it is treated and stored in industrial facilities to ensure lasting protection of human beings and the environment, pending a final national management solution (for long-life waste), or where they are already stored (for short-life waste).

The diagram shows the different stages of this cycle[1]:




### *A. Front-end*

In order to ensure the continuity and reliability of the supply for its reactors, EDF retains overall control of the operations at each stage in the cycle, and manages a portfolio of contracts for the long term.

Through stock build-up at each front-end stage of the fuel cycle (natural uranium, converted uranium, enriched or not, stored fresh fuel assemblies), EDF seeks to avoid resorting to the short-term market in case of production fluctuations in the mines or the cycle plants. These stocks provide guarantees in terms of security of supply and price, in high-variation upstream materials and services markets.

In 2009, in the context of the Group's integration, it was decided to mutualize, from March 31, 2010, the uranium and associated services (conversion, enrichment) supply for EDF and British Energy.

#### *Natural uranium supply*

Most of EDF's uranium supplies are guaranteed in the long-term by contracts for periods of 7 to 15 years already signed, or by reciprocal commitments that will ultimately be confirmed by definitive contracts (options guaranteeing access to volumes subject to conditions of price negotiation, for the end of the period of cover). The primary objective of this long-term supply policy is to guarantee the long-term security of EDF's supplies and it also contributes to partial hedging of the price risk.

A significant part of the supplies is provided by AREVA from various geographic sources. Since 2004, EDF has been implementing a policy of diversification of its suppliers, enabling it to reinforce supplies from high-potential areas such as Australia, Kazakhstan, and Canada.

Indexation formulas for portfolio contracts of natural uranium supply include fixed prices (basic prices whether inflated or not) and variable prices (indexed according to market price indexes) and are sometimes limited by floor and ceiling prices. Consequently, the effects of variations in the rise in market prices of natural uranium on supply costs are limited and smoothed out while enabling a benefit from potential decreases in price.

#### *Conversion (or fluorination)*

The financial weight of the conversion stage represents a small proportion of the fuel costs.

A significant part of EDF's needs are covered by the Comurhex plant of the AREVA group, as well as other international producers, such as Cameco in Canada and the United Kingdom, Converdyn in the United States and Tenex in Russia.

The contracts that EDF signed in 2007 and 2008 strengthen the cover of EDF's needs in conversion services for approximately the next ten years.

#### *U-235 enriched uranium*

A significant proportion of the enrichment services procured by EDF come to date from the Eurodif plant (AREVA group), which uses gas diffusion technology. The AREVA group has decided to replace the existing Georges Besse I plant with a new installation (Georges Besse II), which will use ultracentrifugation technology that requires less electricity. In December 2009, AREVA announced the rotation of the first centrifuged cascade in Georges Besse II plant.

1 Concerning the deep storage of long-life high-level waste, see section "B. Back-end – Storing conditioned ultimate waste" below.

In 2007, EDF and AREVA extended their contractual relationship relating to the use of Georges Besse I until 2010, and in 2008 concluded a long-term contract which defines the conditions under which EDF will take a proportion of the Georges Besse II's future generation (starting in 2013). In parallel, in order to improve the competitiveness of its supply as rapidly as possible through use of a greater proportion of the ultracentrifugation enrichment services, EDF secured significant coverage of its needs at the beginning of 2006, from other enrichers on the market: Urenco (United Kingdom, Germany, the Netherlands), Tenex (Russia) and USEC (United States of America).

The cover of the EDF fleet's needs in enrichment services has thus been reinforced in order to reach the post-2020 period, on the basis of predominantly fixed-price contracts, decreasing in real terms.

*Enriched uranium reprocessing – URE*

This reprocessing makes it possible to recycle uranium from processing spent fuel, which represents approximately 95% of the spent fuel mass. The reloads provided by this reprocessing are carried out at the units of the Cruas power plant.

The annual quantity of reprocessed uranium that is not immediately in use is stored in a stable form in order to be used at a later stage, depending on market trends for natural uranium.

*Fuel manufacturing*

Contracts with two assembly fuel manufacturers, AREVA NP and Westinghouse, were renewed in early 2007 to cover all requirements from 2008 to 2012, and include provisions relating to product developments.

Most of EDF's needs are covered by the contract signed with AREVA NP in March 2007. It includes the manufacture of MOX and URE assemblies.

*Strengthening competitiveness by improving the fuel energy output.*

EDF has implemented a strategy aiming at gradually increasing the efficiency of nuclear fuel for its different series, with the aim of increasing fuel energy efficiency by increasing the combustion rate and optimizing operating cycles in order to increase the availability of the nuclear power stations, while enabling outage profiles that are consistent with the seasonal variation of demand.

### *B. Back-end*

EDF takes responsibility for the use and processing of its spent fuel and associated waste. AREVA is responsible for processing and ANDRA is responsible for long-term management operations for the storage of ultimate waste, in accordance with the law of June 28, 2006 concerning the long-term management of radioactive material and waste.

EDF's currently adopted strategy with regards to the fuel cycle, in agreement with the French State, is to process spent uranium fuel and to recycle the plutonium separated in the form of MOX fuel. From 1,200 tonnes of fuel reactors annualy discharged, the quantities handled are determined by the amount of recycled plutonium in reactors allowed to load MOX fuel. The current recycling capabilities lead to treat about 850 tonnes of spent fuel per year until 2009, quantities that will increase in the coming years with the possibility of additional recycling provided by the use of MOX fuel in reactors 5 and 6 at the Gravelines nuclear power plant.

*Processing spent fuel from EDF's nuclear power stations*

Spent fuel awaiting processing is temporarily stored under water in cooling pools, under conditions that are recognized as being safe over time periods of several decades. At the end of a period of approximately 15 years after they have been unloaded from the reactor, spent $UO_2$ fuel are processed at AREVA's The Hague site in order to separate the products that can be recycled from the waste. The waste is subsequently conditioned and temporarily stored at this site in specific premises.

The relationship between EDF and AREVA concerning the transmission, processing and recycling of spent fuel for the 2008-2040 period was formalized by a framework agreement signed December 19, 2008, following the 2001 protocol.

It deals with:

- the transportation of spent nuclear fuel from EDF's power plants to The Hague reprocessing plant, and its storage;
- the separation of the fuel materials that can be recycled (uranium, plutonium) from high-level waste, and their conditioning;
- the conditioning of radioactive waste extracted from spent fuel; and
- the intermediate storage of the conditioned waste pending their discharge to a long-term management center;
- recycling of plutonium in the form of MOX fuel;
- the different steps of uranium recycling from processing in the form of URE fuel (see "Enriched uranium reprocessing – URE" above);
- EDF's contribution to the costs of decommissioning facilities at The Hague, for which it fixes the amount of a cash compensation balance to be paid by EDF to AREVA.

For the period 2008-2012, the agreement fixes the prices and quantities of services charged to AREVA by EDF. In this context, it provides for an increase of the annual quantities of processed spent fuel and MOX fuel to 1,050 tonnes and 120 tonnes respectively between 2010 and 2012. The conditions for the implementation of the agreement of December 19, 2008 have been specified in an agreement signed by EDF and AREVA on February 5, 2010. The declination of this agreement in a contract covering the period 2008-2012 is ongoing.

*Storing conditioned ultimate waste*

Radioactive waste, depending on their nature, level of radioactivity and the life-period of their constituent radionuclides, have been classified into different categories: from high-level waste to low and medium-level waste to very low-level waste. They are called "long life" when their period of activity lasts for more than 30 years, and "short life" otherwise.

#### • *Long-life high-level waste*

The processing of spent fuel enables the vitrification of long-life, high-level waste which ensures very high-quality conditioning under a reduced volume, stored in La Hague in specific facilities. All of the long-life, high-level waste produced in this way, corresponding to the operation of the natural uranium graphite gas (UNGG) and to 40 years of operation of the current PWR facilities, will represent a volume of approximately 6,700 cubic metres.

On the basis of the works and research carried out in the context of the law of December 30, 1991, another law of June 28, 2006 defines a research program for the long-term management of long-life, high-level waste, retaining in its plan, for the management of radioactive materials and waste, the geological storage: *"following temporary storage, ultimate radioactive waste that cannot be stored at surface level or at a shallow depth for nuclear safety or radioprotection reasons, is to be stored in deep geological layers."* It indicates notably that: *"in order to ensure [ ... ] the management of long-life high- or medium-level radioactive waste, research and studies relating to this waste are being carried out [ ... ] and notably reversible storage in deep geological layers* [ ... ] The law states that: *"in order to choose a site and create a storage center so that the request for its authorization [ ... ] be examined in 2015 and, subject to this*

*authorization, the center be put into operation in 2025"* (for more information regarding law dated June 28, 2006, see section 6.5.4.2 ("Specific regulation applicable to nuclear plants") below).

*• Long life medium-level waste*

The structures of the assemblies (shells and nozzles, clad pieces, etc.), separted during the processing of spent fuel, constitute long life medium-level waste, having a lower activiy than longlife-high level waste. They are currently compacted and conditioned in stainless steel containers. Other long life medium-level waste is produced by research or the fuel manufacturing cycle. The total volume for EDF's share including the waste resulting from the operation of the Uranium Naturel Graphite Gaz facilities and that resulting from 40 years of operating the current PWR facilities, will be approximately 37,000 cubic meters. Unlike long-life high level waste, they do not generate heat and thus are suitable for faster storage than long- life high level waste because they do not require a long cooling off period before storage.

As with long life high-level waste, long life medium-level waste is temporarily stored at the Hague site in specific premises, awaiting decisions to be taken in the context of the law of June 28, 2006 concerning storage in deep geological layers.

*• Long life-low level waste*

Long life, low-level waste comes from the decommissioning of former UNGG reactors (graphite, processing waste). Considering its life time, this waste cannot be stored in the existing surface centers (see hereinafter), but considering its low level, inferior to long-life high and medium level waste, law of June 28, 2006 provides for this waste a specific storage in subsurface, currently being studied (see section 6.2.1.1.3.2 ("Environment, safety and radiation protection") above), and in 2008 ANDRA launched a search for sites (see section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants – 1. Decommissioning of first-generation power plants that have been shut down") below).

*• Short life-medium and low level waste and very low level waste*

Short life-medium and low level waste comes from nuclear installations (gloves, filters, resins, etc.). It is stored on the surface at the Soulaines Storage Facility managed by ANDRA, designed for low and medium-level waste.

Very low-level waste is waste whose radioactivity is very close to natural radioactivity. Mainly arising from the decommissioning of nuclear installations, it results mainly from rubble (concrete, scrap, lagging, piping, etc.). This waste is stored on the surface at the morvilliers storage facility ("cstfa") managed by ANDRA.

*Acceptance of future charges relating to the management of spent fuel and long term management of radioactive waste*

Each year, EDF makes provisions for the downstream of the nuclear fuel cycle in France (see note 35.2 to the consolidated financial statements for the year ending December 31, 2009) which cover the management of spent fuel (including fuel in the reactor but yet irradiated) and the long-term management of radioactive waste.

To assess the future management costs of long life, medium- and high-level waste resulting from the processing of burnt fuel, EDF used deep geological storage of waste as an assumption, pursuant to the law of June 28, 2006, which established the storage of waste in deep geological layers as a reference solution.

For long life, low-level waste, from the deconstruction of shutdown UNGG power plants, provisions are established by EDF from the schedules of production of these wastes and cost assumptions relating to the terms of storage defined by ANDRA.

The cost of evacuating and storing short life waste medium and low-level waste and very low-level waste is determined on the basis of contracts entered into with ANDRA and the various carriers for the operation of existing Storage Centers. The costs of disposal and storage of waste from the deconstruction of power plants are provided, only the charges relating to operational waste being treated in annual expenses.

EDF's provisions as at December 31, 2009 were established in accordance with the prescriptions of the law of June 28, 2006 and implementation texts published in 2007.

### *6.2.1.1.3.5* Preparing for the future of the nuclear fleet in France

EDF believes that nuclear energy provides a lasting and economically efficient solution for future energy needs, in a context of decreasing fossil resources where proven worldwide reserves of fossil energy are limited, based on current consumption, at approximately 40 years for oil, 60 years for natural gas and 144 years for coal (AIE – World Energy Outlook 2008). According to confirming sources (AEN – *Agence pour l'énergie nucléaire*), the estimated uranium reserves will last for approximately 100 years at the current level of nuclear production. The development of a new generation nuclear reactor (called the fourth generation, see below) will enable the level of consumption of natural uranium to be reduced significantly and the level of these energy reserves to be increased to several thousand years. Furthermore, electricity generation from nuclear energy has the advantage of emitting very little greenhouse gases.

The program law of energy policy guidelines of July 13, 2005 (LPOPE) (see section 6.5, ("Legislative and regulatory environment")) provided for the rapid launch of an EPR in France, confirming the preservation of the nuclear option. For EDF, preparing for the future of the nuclear fleet depends on three strategic factors:

- extending the operating life of the nuclear power plants beyond 40 years;
- building a first EPR unit in Flamanville and the launch of a second EPR unit in Penly (if the project is confirmed after the public debate set up in 2010); and
- increasing the generation capacity of the existing fleet by studying ways to increase the power of twenty 1,300 MW units. This could lead, gradually from 2017, to a total increase of generation capability between 8 to 15 TWh.

*A. Operating life of EDF's PWR installations*

As part of the studies related to the third 10-year visits for the 900 MW units, in early July 2009 the NSA publicly stated that it had not identified a generic problem calling into question EDF's ability to control the safety of its reactors of 900 MW up to 40 years. As required by the regulation, the position of the NSA will later be completed by a position on each reactor by the end of every third 10-year visit.

In 2009, the Tricastin 1 unit was the first unit of the 900 MW series to achieve its third 10-year visit. By the end of August, the NSA authorized its restart. The Fessenheim 1 unit also realized its third 10-year visit from October 2009 to March 2010. Following this 10-year visit, the NSA authorized the restart of the unit. EDF then has six months following the restart of the units to deliver the 10-year visit report to the NSA, based on which the NSA will make its decision with regard to the reactor's operating life.

EDF's objective is to significantly extend the operating life of its fleet beyond 40 years, consistent with the trend observed on an international level concerning plants with the same technology (United States of America, Japan, Sweden, Switzerland, etc.). To this end, EDF has implemented industrial and research and development action plans. Solutions to the obsolescence

of certain components (in particular, for the vessel of the reactor and containment facilities, which are considered to be non-replaceable), and to the renewal of certain major components are being studied ("safety system of reference").

Furthermore, the 2006 TSN law (Nuclear Transparency and Safety – *Transparence et Sécurité Nucléaire*) requires that the safety level of facilities be reviewed in light of best international practices.

In 2009, EDF forwarded to the French NSA the intended safety improvements for operating the fleet beyond forty years. The corresponding investments are estimated at at least €400 million in average (2008 Euros) per unit, spread out over about twenty years from the next decade onwards. The NSA plans to examine these improvements in early 2011 by the Standing Group of Experts, composed of experts commissioned by the NSA.

11 nuclear units will reach a 40 year-operating life between 2015 and 2020. Shutting down these units would entail major investments in new nuclear units. Extending the operating life of the current nuclear fleet by 10 to 20 years would therefore enable:

- the deferral of financial flows associated to decisions concerning investment in these new plants to beyond 2025; and
- the smoothing over time of the putting into service of new plants, which is beneficial from an industrial point of view.

### *B. The European Pressurized water Reactor ("EPR") and associated challenges*

#### *1. EPR: a major industrial challenge*

In anticipation of the industrial development of new-generation reactors (fourth-generation: sodium fast reactors, gas high-temperature reactors, gas or lead-bismuth cooled reactors, etc.), which will not appear industrially on the market before 2040-2045, most of the leading nuclear contractors and nations are developing intermediate generation reactors (3 and 3+ generation) which are an improvement (in terms of cost and safety) on the existing reactors and which will be available on the market in the shorter term, such as Westinghouse's AP1000, the General Electric's ESBWR and the EPR.

EDF has opted for EPR technology to prepare the future of electricity generation from nuclear energy. This reactor is the result of the joint experience of operating the two biggest European nuclear fleets – the French and German fleets – and its safety standard has been examined by the German and French safety authorities.

As part of the renewal of European generation facilities, EDF wishes to maintain the technological advantage it acquired in the 1970s and 1980s, with the development of a standardized and industrially controlled nuclear fleet.

The Flamanville 3 project enables EDF to be ready in industrial terms for the construction of new reactors in France and abroad, in coherence with its strategy for the international development of nuclear energy (see section 6.1 ("Strategy")):

- by managing a reactor model that has been technically proven and that complies with the requirements of the NSA;
- by providing an operational industrial organization, established during the construction of the first model;
- by acquiring sufficient experience building a first unit of EPR technology, before launching new units.

#### *2. The EPR industrial project*

The EPR is a reactor of about 1,600 MW developed from the early 1990s by AREVA NP (AREVA group with a 66% interest and Siemens with a 34% interest), in partnership with EDF and German electricity companies, who participated in financing its development and contributed the technical knowhow acquired through the operation of their nuclear fleets. Like other reactors in use in France, the EPR is a pressurized water reactor. It has already been studied by the safety authorities, and benefits from technological and operational advances that have been incorporated into the most recent French and German reactors.

The breadth of the EPR industrial project also presents ambitious goals, relating to:

- safety;
- environmental protection;
- technical and economic performance;
- optimized organization of project management in this nuclear unit.

*Safety.* The development of the EPR new kind of reactor encourages EDF to increase the safety of its nuclear fleet by reducing the likelihood of a serious accident and limiting its potential consequences. These safety goals were adopted since the reactor's design phase.

*Environmental protection.* Through its participation in the EPR project, EDF continues to maintain its commitment to environmental protection, by significantly improving its performance in comparison with its existing fleet, through continual progress using feedback obtained from its experience.

*Environmental, technical and economic objectives.* With regard to the current units, the EPR project's principal objectives are to:

- reduce the volume of radioactive waste and discharges;
- aim, in the context of radiation protection, to halve the collective annual dose compared with the current average level for units in operation in France;
- increase the availability factor to 91% owing to to certain design principles derived from the German reactors and allowing generation while maintenance operations are being carried out; and
- have a technical operating life of 60 years.

Furthermore, the EPR should enable some reductions to be made in operating expenses per kW and per kWh thanks to its technical performances and its size effect currently noted between the PWR 900 and the PWR 1,300 series.

*"Architect-assembler engineering".* In constructing EPR units in France, EDF intends to maintain direct control of:

- the design and operation of its power plants;
- the organization of development projects;
- schedule and costs of construction;
- its relations with the NSA; and
- the direct integration of operating feedback.

This control cannot be separated from the role of architect-assembler which corresponds to the position adopted by EDF during the development, renovation or decommissioning of its generation assets, and is based on its internal engineering capabilities.

The EDF group's integrated engineering skills are an important asset for the management over the long term of the performance and safety of its nuclear, hydropower and fossil-fired generation assets.

#### *3. Progress made on the Flamanville 3 project*

*Launch phase.* In October 2004, EDF's Board of Directors decided to undertake the process of building an EPR nuclear generation unit in France located in Flamanville.

A public debate was organized by the French Commission for Public Consultations (CNDP) concerning the construction of a first-of-a-kind EPR reactor.

The building authorization decree for the Flamanville nuclear facility was delivered April 10; 2007 and was published the day after in the French official journal. The main building permit was obtained on April 24, 2007.

Associations have filed several complaints against some of the administratition authorizations. All complaints have been rejected by the administrative judge.

*Realization studies.* The design studies have been completed. Realization studies are now underway in order to ensure the efficient progress of onsite construction and those instructions necessary to the start-up of the facilities.

In the context of examination process relating to the Flamanville 3 reactor, the French NSA expressed certain requests concerning the control system of EPR in a letter dated October 15, 2009, included in a press release dated November 2, 2009, published jointly with the UK Nuclear Safety Authority (HSE / ND) and the Finland Nuclear Safety Authority (STUK). To ensure safety, the control system of the EPR includes two independent and complementary systems to ensure proper control of the reactor in any circumstance. The NSA indicated in its letter of October 15 that "the technological diversity of the two control systems, an important element of the structure's sturdiness, is satisfactory". However, EDF has been requested to deepen the safety analysis of certain components of the second system and to examine several solutions. EDF committed to provide the NSA responses expected in the time required and in particular to achieve the necessary demonstration concerning the second system of control monitoring. The deepening of technical analysis has no impact on the construction site of Flamanville 3 in its current phase of implementation of civil engineering.

*Supply and work contracts.* At the end of 2009, EDF had awarded approximately 150 contracts, representing nearly 99% of the total amount. The 6 largest contracts (boiler, engine room, civil engineering, order control, piping, electrical fittings) represent approximately 70% of the project's budget. All of the mains contracts, with exception of the boiler contract signed with AREVA, were awarded following international invitations to tender.

*Work on site.* After a preparatory phase which began in summer 2006, the construction of the EPR reactor Flamanville 3 has been underway since September 2007.

During 2009, the following operations were performed:

- for the reactor building: the end of concreting the raft of internal structures, laying the bottom of the metal skin sealing the inner containment chamber (commonly called "liner") and the beginning of the elevation of its vertical part, the continuing of the operations of reinforcement and concreting of the internal and external inclosure;
- for the pumping station: the installation of the piping circuit for raw water is being finalized and the concreting of most of the rafts is finalized;
- for the engine room: the assembly of the structure of the engine room and installation of the handling components bridges;
- for other structures (fuel storage buildings, auxiliary backup, diesel backup, etc..); continuing operations of concreting and iron frameworking with the elevation of the first levels of these buildings, construction of the first equipment on the diesel buildings, and the realization of the first activities of assembling electrical equipment non classified for safety;
- for the work of discarding: the early excavation of the gallery of rejection through a tunnel.

The start of Flamanville 3 is expected in 2012 for a first marketable electric generation in 2013.

*Costs and competitiveness of the EPR.* The construction of Flamanville 3 EPR had been evaluated in 2008 to cost €4 billion, under 2008 economic conditions.

In 2008, EDF had estimated the total production[1] cost of Flamanville 3 at €54/MWh (in 2008 Euros). Furthermore, based on the medium-long term and lowest possible estimates of the cost of fuel and $CO_2$, EDF estimates, that the production cost for a new combined-cycle gas turbine installation baseload operating is a minimum of €68/MWh (in 2008 Euros) and €70/MWh (in 2008 Euros) for a coal-fired plant. EDF therefore considers that the Flamanville 3 EPR should remain competitive compared to alternative thermic generation means, for a supply base.

*Industrial partnership with Enel.* On November 30, 2007, EDF and Enel signed an industrial partnership agreement for nuclear power generation, with the following terms:

- Enel has invested in Flamanville 3 up to 12.5% of the construction and operation costs as well as decommissioning costs and long-term management of nuclear waste;
- Enel receives in return 12.5% of the electricity generated by Flamanville 3, over the time of its operation, delivered in France on the RTE-EDF Transport transmission network;
- EDF is the operator of the Flamanville 3 facility, assuming full nuclear responsibility and will ultimately make all of the decisions; and
- Enel can assign its engineers to teams managing the site as it is being built or while it is in operation, in order to acquire skills in nuclear power generation.

Enel has options to invest in the next five EPRs that EDF may build in France, under the same terms and conditions as the ones for the Flamanville first-of-a-kind reactor.

In order to exercise these options, Enel must give EDF a right to participate, under the same terms and conditions as those for Flamanville 3, in the construction of EPRs which Enel may develop in Italy or elsewhere in Europe, or in other investment projects of the same type.

For more information on the renewal of the nuclear energy generation in Italy, see section 6.3.1.3.3 ("Nuclear renewal in Italy") below).

### *4. Status of the Penly 3 project*

On January 30, 2009, the President of the French Republic confirmed the construction on the Penly (Seine-Maritime) site of a second EPR-type nuclear reactor, which will be built by EDF. On April 1, 2009, the Board of EDF agreed to initiate the process leading to the construction of the EPR nuclear unit. EDF will build such equipment as part of a project company. EDF will hold a 50% stake in this project company, plus one share, GDF SUEZ and Total will be involved in the transaction with a 33.33% stake in the project company, plus one share for both companies. EDF has also initiated discussions with other energy companies in order to involve them as partners within the limit of the remaining 16.66%; this includes in particular Enel, which established a cooperation agreement with EDF and is already part of the Flamanville 3 EPR project, as well as E.ON, the second largest nuclear operator in Europe, which, alongside EDF, was one of the sponsors in the EPR preliminary studies during the 1990s.

EDF referred to the National Commission of Public Debate (*Commission Nationale du Débat Public*) on May 29, 2009 and the *Commission Particulière* in charge of this debate was established on September 2. The public debate is initiated from March 24, 2010.

In 2008, EDF estimated that, depending on the pressure on the equipments market, the total production cost of a second EPR would be between €55 and €60/MWh (in 2008 Euros). EDF considers that nuclear energy is therefore a long-term competitive production means.

1 Updated sum of projected costs in constant Euros per MWh, including construction costs, interim interests, decommissioning costs, operating and maintenance costs, taxes and fuel costs including charges related to the downstream cycle.

### *6.2.1.1.3.6* Decommissioning of nuclear power plants

EDF takes full financial and technical responsibility for the decommissioning of its nuclear power plants. For EDF, the issue is to demonstrate, through the decommissioning process, its control of the entire life cycle of the means of nuclear power generation.

The decommissioning of nuclear power plants involves three levels, according to a classification defined by the International Atomic Energy Agency (IAEA) in 1980:

- level 1: shutdown of the plant, fuel unloading, draining of circuits (99.9% of radioactivity is eliminated), followed by final shutdown: dismantling of non-nuclear facilities that are permanently decommissioned, with limited access;
- level 2: dismantling of non-nuclear buildings and nuclear buildings excluding the reactor building, packaging and evacuation of wastes to storage facilities, isolation – containment – the section of the facility surrounding the reactor is kept under surveillance;
- level 3: complete dismantling and removal of the reactor building, and of materials and equipments that are still radioactive; surveillance is no longer necessary; following these operations, the site may be re-used for industrial purposes.

In practice, the operations leading from Level 1 to Level 2 are conducted consecutively over a period of time of approximately 10 years after the reactor ceases production. A waiting period may occur between the end of operations leading to Level 2 and the beginning of operations leading to Level 3, in order to allow the radioactivity in the irradiated materials to decay. The length of this waiting period may vary, depending on the comparative interest of radioactive decay and the length of time the facility must be monitored and can depend on the re-use envisaged for the site. At the end of this waiting period, the length of time spent on operations leading to Level 3 is estimated to be approximately 10 to 15 years.

*1. Decommissioning of first-generation power plants that have been shut down*

EDF has chosen to completely dismantle power plants that have been shut down (one PWR: Chooz A, one heavy-water reactor (HWR): Brennilis, one fast neutron reactor: Creys-Malville and six UNGG-type reactors in Bugey, Saint-Laurent and Chinon) by 2035, following the delay by ANDRA in putting into service the graphite storage. The sites remain the property of EDF, and they will remain under its responsibility and monitoring. With regards to the other PWR power plants, certain decommissioning options, including those relating to the timeframe, have not yet been finally decided.

Given its role as responsible owner, EDF will act as the contracting authority for the decommissioning.

The regulatory framework for decommissioning was established and the authorization process was completed in 2003. It is characterized, for a given site, by:

- a single decree, following the French NSA agreement allowing for complete decommissioning;
- key meetings to be held with the French NSA, integrated in a safety reference system;
- an internal authorization procedure for the operator, independent of the operational staff and audited by the French NSA, and allowing the beginning of the work within the limits of the safety reference system authorized (see section 6.5 ("Legislative and regulatory environment")).

The decree for the decommissioning of Bugey 1 was published in the *Journal Officiel* on November 20, 2008. An action against this decree has been filed by an association. This appeal is currently being processed (see section 20.5 ("Legal and arbitration proceedings")).

In an agreement signed in December 2008, EDF and the CEA clarified their respective roles in relation to the Brennilis and Phénix sites. By this agreement, EDF and CEA became completely both technically and financially responsible for the Brennelis and Phénix sites respectively, which clarifies the operational management of projects.

Regarding the Brennilis site, at the end of July 2008, EDF made a new request to the NSA for authorization to decommission. This new request follows the decision of the French Council of State of June 6, 2007 to cancel the decree authorizing the reactor to be fully dismantled, because the results of an impact study on the decommissiony work had not been issued publicly before the publication of the decree. Following this decision, EDF had taken steps in 2007 to ensure that the facility would not pose a threat while the dismantling work was halted. The public inquiry was held from October 27, to December 11, 2009. The commission of inquiry gave an unfavorable opinion to the project on March 15, 2010.

The decommissioning of EDF's nine shutdown first-generation units will produce approximately 1,000,000 tonnes of primary waste materials, of which 80% is standard waste material and none is high-level waste. The remaining 20% comprises very low to medium-level waste including about 2% waste requiring the availability of a graphite storage centre.

The following waste evacuation procedures are currently being implemented in order to complement those already existing (TFA and FMA):

- the Premises for Conditioning and Temporary Storage of Active Waste project was launched at the Bugey site. The public survey conducted in summer 2006 received a favorable opinion. Technical assessment by the NSA is completed. The process for the enactment of the decree is under way, following the audition before Advisory Commission of Nuclear Facilities (Commission Consultative des Installations Nucléaires de Base) and favorable opinion given by the College of Commissioners on September 28, 2009. The contract for the design and construction of the Installation has been notified and detailled draft studies are underway. The commissioning is scheduled for 2013;
- the FAVL Waste Storage Center is written in the law of June 28, 2006 concerning the long-term management of radioactive material and waste. The search for sites launched by ANDRA in 2008 has not yet resulted. ANDRA's current schedule provides for the storage to be put into service by 2019[1].

*2. Decommissioning costs*

*EDF nuclear power plants*

Since the beginning of operations at its power plants, EDF has made provisions to cover decommissioning operations, engineering, surveillance and maintenance of facilities, site security (see note 35.2 to the consolidated financial statements for the year ended December 31, 2009). The accrued amounts correspond to EDF's estimate for decommissioning costs incurred in order to reach Level 3. Since the end of 2007, in accordance with the provisions of the law of June 28, 2006 and its implementing legislation, the part corresponding to the management of the long-term radioactive waste from decommissioning has been grouped with all provisions of nuclear waste. Therefore, the amounts provisioned under deconstruction concern strictly industrial operations only.

With respect to PWR-type reactors, the provisions were made for all 58 operational units, on the basis of an estimated amount of

1 Document "*Un centre de stockage pour les déchets radioactifs de faible activité* (FA-VL)", available on the ANDRA website (www.andra.fr).

€2 86 (20 0 9 Euros) per installed KW for all deconstruction operations, excluding management of waste from deconstruction (to compare, identical in scope, to the 2008 figure of €280 (2008) per installed KW)[1].

The detailed decommissioning cost estimates conducted in 1999 using the representative example of the Dampierre site was updated by EDF in 2009, in order to take into account the feedback of the dismantling operations carried out by EDF on its first-generation plants and level 3 dismantling operations carried out by other operators, mainly US ones. During this update, it has been verified by an analytical approach that:

- the cost of decommissiong computed on the basis of installed KW for the four 900 MW units of the Dampierre site was applicable to the entire PWR fleet; and
- the provisions for the decommissioning of the 58 operating units had no need to be revised downwards or upwards.

Furthermore, an international comparison conducted by the OECD in late 2003 showed that EDF's estimates are consistent with the estimates made by other countries. EDF's estimates are approximately 25% above the estimates made for Spanish power plants and 15% below estimates made for German power plants. With respect to Germany, the difference with EDF's estimate may be explained by the use of a different policy for managing very low-level waste, long-life low-level waste and long life medium-level waste (reprocessing and storage in Germany – storage in France).

Unlike the PWR facilities that are in operation, shut down first-generation reactors are of very different types, and the estimated decommissioning costs have been established reactor by reactor.

*Third-party installations: The Hague (AREVA) and Phénix (CEA)*

As the responsibility for the decommissioning of facilities is incumbent on their operator, EDF wished to free itself financially from these operations.

The EDF-AREVA framework agreement signed at the end of 2008 sets the amount of the cash compensation balance to be paid by EDF for its share of the decommissioning of facilities at The Hague, operation which principle was settled from 2003, (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues") and note 35.2 to the consolidated financial statements for the year ended December 31, 2009). An agreement was entered into in July 2009 fixing the amounts and the maturities of the cash compensation balance's payments.

Similarly, agreements concluded with the CEA at the end of 2008 clarified the financial responsibilities of both parties, as indicated above (see note 35.2 to the consolidated financial statements for the year ended December 31, 2009).

#### *6.2.1.1.3.7* Assets available to cover long-term nuclear-related commitments (outside the operating cycle)

In accordance with a decision made in June 1999 by EDF's Board of Directors, EDF gradually built-up the assets dedicated to cover long-term nuclear commitments, by making annual allocations starting in 2000. As of December 31, 2009, these dedicated assets had a market value of €11,436 million (see note 27.3 to the consolidated financial statements for the year ended December 31, 2009).

In accordance with regulations, EDF must provide assets to cover the following commitments:

- decommissioning of the operating PWR plants and non-operating plants (€10.7 billion as of December 31, 2009) (see note 35.2 to the consolidated financial statements for the financial year ended at December 31, 2009);
- removal and permanent waste storage (€6.3 billion as of December 31, 2009 (see note 35.2 to the consolidated financial statements for the year ended December 31, 2009). Pursuant to the order of March 21, 2007, this amount also covers the long-term management of non-recyclable fuel from the existing fleet that was only partially included in the scope set by the Board of Directors on September 5, 2005, as well as the waste from the dismantling of nuclear plants that was not included in the decommissioning itself estimate (in accordance with the legislator's request); and
- the management of burnt fuel and storage of waste connected with the non-consumed part of the plants' last core (€0.4 billion as of December 31, 2009).

Some provisions have been excluded from the scope of dedicated assets because they correspond to expenses considered to be directly related to the operating cycle (according to the order of March 21, 2007).

This includes mainly the provision for management of burnt fuel, which is subject to yearly allocations and reversals and may be classified as part of the operating cycle, like other such items (e.g., fuel inventory).

EDF has not included its share in the decommissioning of third-party facilities in the scope of dedicated assets, because these expenses must be accounted for by facility operators.

Finally, the share of the provision for the last core for an amount of €1.5 billion as of December 31, 2009, which corresponds to the unused fuel that was in the reactor when it was shut-down permanently has already been funded, and is therefore not included in the scope of these commitments.

The allocation to EDF's dedicated assets for 2009 was €1,902 million (see note 27.3 to the consolidated financial statements for the year ended December 31, 2009). On September 5, 2005, the Board of Directors of EDF had decided to allocate €2.35 billion (2005 Euros) for each year from 2007 to 2010. Taking into account the new perimeter defined by the regulatory texts, published in 2007, in application of the law of June 28, 2006 have increased the amount of the tax base of €0.9 billion, the annual portfolio of dedicated assets to the period 2008-2010 was reviewed in May 2008 to €2.78 billion (in 2008 Euros). Taking financial markets conditions in 2008 into account, EDF had decided to suspend the allocations to the portfolio of dedicated assets in September 2008. Allocations have been taken again in July 2009 and the future allocations program has been adjusted in order to meet the regulatory constraint to cover liabilities by the portfolio at at the end of June 2011 at the latest.

### 6.2.1.1.4 HYDROPOWER GENERATION

Electricity generated by EDF from its hydropower plants represented 9.4% of its total electricity production in 2009.

#### *6.2.1.1.4.1* EDF's fleet of hydropower generation facilities

EDF's fleet of hydropower facilities in mainland France comprises 447 power plants:

- approximately 10% of the power plants have a unitary capacity that exceeds 100 MW; they represent approximately 50% of total output;
- approximately 55% of the power plants have a unitary capacity that is below 12 MW; they represent approximately 10% of total output.

The fleet's average age is approximately 60 years and more than a third of the installations are over 75 years.

1 The figure of €306 KW released by EDF in its 2008 *Document de Référence* included the provision for waste resulting from deconstruction.

The power plants are mainly located in mountainous areas in the Pyrénées, the Alps, the Massif central and the Jura, as well as on the Rhine. In total, they represent an installed capacity of approximately 20 GW (excluding Overseas departments and Corsica), or 21% of EDF's fleet, for annual generation capability (i.e. for an average hydraulicity) energy of approximately 45 TWh, which makes France the leading generator of renewable electricity in the European Union.

The various hydropower infrastructures were designed to optimize the uses of water resources in the valleys. As a result of the size and variety of its fleet, EDF has systems that are capable of responding to all types of demand, whether base load or peak, and that offer optimization leverages due to their flexibility of use:

- "run-of-river" facilities like those on the Rhine do not have storage capabilities and produce energy depending on the supply of water available at any given time. They represent a total capacity of 3.6 GW and a generation capability of 17.7 TWh;
- EDF has one tidal power plant on the Rance: it uses the rising and falling movement of the tide to create the vertical drop that is essential to the generation of energy, and which produces electricity in a very reliable manner. This station has a total capacity of 240 MW and a generation capability of 500 GWh;
- pondage power stations are associated with small reservoirs along a river, and are used according to a schedule during the week or during the day, to cover peaks in demand. They have a total capacity of 3.1 GW and a generation capability of 9.1 TWh;
- the pumped storage power plants comprise an upstream reservoir and a downstream reservoir. During periods of low demand, water is pumped up from the downstream reservoir to create a water storage, which will be used to generate electricity during peak load periods (the water is then "turbined" from the upstream reservoir to the downstream reservoir). They represent a total capacity of 4,3 GW, which over the past few years have enabled the pumping of approximately 7 TWh and the turbining of approximately 5 TWh, as well as an average output of 1.1 TWh, by means of natural water supplies in the upstream reservoir of certain pumped storage power plants;
- the "*reservoir*" facilities located in the mountainous regions (Alps, Massif Central and Pyrénées) represent a total capacity of 8.8 GW and a generation capability of 16.1 TWh. They are used for their large storage capacity from season to season. Depending on demand, they can also on some periods fill their reservoirs in order to be available during periods of high consumption or in order to ensure balance in the electrical system. In order to ensure the balance and optimization of its upstream/downstream asset portfolio in France, EDF, through their storage capacity, therefore holds an optional share in over thirty significant *"reservoir"* installations.

#### *6.2.1.1.4.2* Hydropower safety

Hydropower safety includes all the measures taken at the time of the design and management of hydroelectric schedules and its purpose is to manage risks that the presence or operation of hydropower facilities may create for people, property and the environment (see section 4.1.2.2 ("Management of hydropower safety risk")). It involves three main activities:

- the management of variations in levels or flows on the downstream of sites;
- operations during flood periods, in order to ensure safety with respect to facilities and inhabitants; and
- the prevention of a major risk, such as the rupture of an hydropower site, by means of monitoring and maintenance of existing structures under the control of public authorities, namely the Regional Divisions for Industry, Research and the Environment (*Directions Régionales de l'Industrie, de la Recherche et de l'Environnement,* or DRIRE). Among the most important dams, 68 are being subject to a specific administrative procedure (*Plan Particulier d'Intervention*) implemented by the relevant prefect.

EDF carries out regular monitoring and maintenance of its dams, namely by their constant testing. Real-time analysis and reports for each site of several parameters (settlement, pressure and outflow measures associated with a visual inspection of concrete or the control of the mechanical parties) enable EDF to regularly prepare reports on the condition of its dams. In Grenoble and Toulouse, thanks to a series of sensors, EDF's teams can analyze the most important or the least attainable dams remotely and, if necessary, in real time.

Finally, a complete check-up of each of the 150 most important dams is carried out every ten years, as well as a drain down or a structure inspection through sub-aquatic equipment. These monitoring operations are carried out under the control of State's services (DRIRE and the STEEG – Electric Power and Important Dams Technical Service (*Service Technique de l'Énergie Électrique et des Grands Barrages,* both reporting to the Ecology, Energy, Sustainable Development and Sea Ministry). In 2009, EDF carried out 18 complete check-ups at its sites.

Hydropower safety is an absolute priority for hydropower generation, and has been the catalyst for the substantial development in operating practices and policies adopted over the last few years. It is a determining factor in influencing decisions relating to the maintenance of EDF's assets.

#### *6.2.1.1.4.3* Performance of the fleet of hydropower generation facilities

##### *Highly-automated facilities*

In order to take advantage of the flexibility of its hydropower generation facilities, for some years now, EDF has been initiating ambitious programs involving automation, remote control of hydropower plants and centralized management of the valleys. Currently, the 100 largest plants in EDF's hydropower fleet, representing over 15,000 MW and over 75% of its installed hydropower capacity, are remote-controlled from four control centres capable of changing their operating program at any moment in order to respond to the needs of the electric system and economic opportunities arising on the electricity market.

##### *The fleet's technical performance*

Hydropower generation varies from year to year, depending on fluctuations in water resources. 2009 was a year where hydraulicity was below average, especially in the second half year. The production of electricity from hydropower sources (not taking into account a deduction of the 6.8 TWh of electricity consumption necessary for the functioning of the pumped storage power plants) has been of 41.9 TWh.

The overall availability of the hydropower fleet, i.e., the percentage of time over the year during which the power plant is available at full power, was approximately 91% on average between 2004 and 2008.

In 2009, this availability was 86.7% due to programmed maintenance work, carried out in order to improve the long-term functioning of the fleet and more extensive than in preceding years. For 2009, the unavailability of EDF's hydropower fleet is due to facility maintenance (11.7%) and unplanned unavailability due to the extension of maintenance works and contingencies (1.6%).

The demand response rate, i.e., the rate of success in responding to startup orders received by the power plants, has been over 99% for several years in a context of an increasing number of orders for hydropower generation sites.

Continuing the procedure initiated in 2005 for identifying risks of faults by kind of material and in a context marked by some instances of default leading to the medium-term unavailability of installations (Tuilières dam in Dordogne, etc.), EDF decided, in 2006, to implement a program to upgrade the technical standard and reinforce maintenance of works for a global amount of €560 million over the 2007-2011 period in order to renovate certain installations, to maintain a lasting high level of hydropower safety, and to preserve the long-term technical performances of its fleet.

This 5-year renovation program for hydropower facilities, called Hydropower Safety and Performance (SuperHydro), will entail longer programmed outages than those recorded in recent years while the work is under way.

The program was started in 2007 and is proceeding as planned. The priority is to restart facilities that were shutdown in 2007 (Tuilières and Pragnères) and improve the fleet's performance. The Tuilières dam has undergone rehabilitation and its generation (approximately an average of 120 GWh per year) restarted in 2009.

The completion rate of the program at the end of 2009 was approximatlely 50%. The work completed has not affected the fleet's demand response rate.

After the SuperHydro program is complete, EDF intends to achieve an availability rate of more than 92%.

#### *6.2.1.1.4.4* Current and future hydropower generation issues

The hydropower fleet faces the following issues:

##### *Concessions renewal*

Hydropower generation facilities are operated through:

- concessions granted by the French Prime Minister for facilities exceeding 100 MW, or by the prefect, for facilities whose capacity is between 4.5 MW and 100 MW; and
- permits granted by the prefecture for facilities of less than 4.5 MW.

EDF currently holds the majority of the hydroelectric concessions in France.

The concessions had an initial term of 75 years, pursuant to the French law of October 16, 1919, with respect to hydropower, and are in general renewed for terms of 30 to 50 years. The renewal of these concessions provides an opportunity to update the specifications in response to new requirements for water resource management and the most recent specifications set forth in the appendix to decree 99-872 dated October 11, 1999, modified by decree 2008-1009 dated September 26, 2008.

Because of its status as a French *société anonyme*, and pursuant to the Sapin law (1993) (see section 6.5.4.3 ("Regulations applicable to other generation methods used by the Group")), EDF is now subject to open competition for the renewal of its hydropower concessions.

10% of the company's total installed hydropower capacity owned by EDF in France (around 7% of EDF's total hydraulic generation) is covered by concession contracts that will expire before 2015. However, the French State has chosen the principle of advancing the expiry date of some other concessions, in order to make groupings by valley. These advances could increase to 15% (nearly 7 TWh) of EDF's total generation, which will be opened to competition by the the end of 2015. An additional 0.5% of EDF's total hydraulic power in France will expire by 2020.

Under current regulations, if a concession is not renewed, the former concession holder does not receive any compensation. Upon expiry of the concession, all of the facilities belonging to the French State (installations from the dam to the turbine) must be in "good working and maintenance". The amended finance act for 2006 provides for the reimbursement of unamortized expenses related to modernization works or works having allowed for the expansion of the generation capacity, provided that these works were made during the second half of the concession.

The concessions the expiry date of which has been brought forward must be compensated by the French State, in order to offset the shortfall resulting from the early termination of the concession's operation, for the outgoing holder of the concession, pursuant to the provisions of the concessions' rules.

The hydropower concessions, at the time of their renewal, are subject to an annual charge indexed according to the revenue from sales of electricity produced by the conceded hydropower structures, paid to the French State and allocated in part to the *départements* on the territory of which the water courses used flow. The Grenelle 1 law of August 2009 provided that the amount of this charge may be derestricted above 25%, threshold set by the amended Finance Act for 2006. The Grenelle 2 draft law, at the date of this *Document de Référence*, provides for a limit set on a case by case basis by the conceding authority, within each competitive situation. In the state of the draft law, a part of this charge would also be allocated to municipalities.

Decree n° 2008-1009 dated September 26, 2008 sets the rules and procedures for a hydropower concession request in a competitive market. It determines 3 criteria for the choice of the future concessionary: guarantee of the energy efficiency of the operation of the waterfall; respect of a balanced management of water resources; best economic and financial conditions for the licensor or the conceding authority. The new procedure for the designation of a concessionary will now have duration of 5 years (against 11 years currently).

EDF will seek to obtain the renewal of the concessions that it holds.

##### *Managing access to water*

The 239 dams-reservoirs operated by EDF in France enable the storage of 7.5 billion cubic meters of water, i.e., 75% of national surface storage reserves.

The hydropower installations have positive effects on both economic development and the environment. EDF has a proactive management policy in relation to its hydropower resource, which it enforces in cooperation with various stakeholders. EDF has entered into agreements with local elected officials, farmers, fishermen, managers of tourist sites and manufacturers.

EDF gives preference to consultation with local users. This process aims first at measuring the real effects of hydropower operations on the environment and on other uses, before attempting to minimize these effects when technically possible and financially reasonable.

As a result, 700 million cubic meters of water can be released each year from the dams depending on the needs to satisfy uses other than the generation of electricity (supplies of drinking water, to supplement periods of low flow, irrigation, production of artificial snow, water sports, etc.).

The law on water and aquatic environments of December 30, 2006, contains provisions relating to the management of water resources (in particular, the value of reserved flows[1] and the flexibility of hydropower plant operations). EDF estimates that these provisions will have medium-term consequences for its hydropower activities (see section 6.5, ("Legislative and regulatory environment")).

1 Minimum flow maintained downstream of dams to preserve aquatic life.

***Development***

95% of France's hydropower capacity is currently being operated.

EDF is nevertheless continuing the development of its hydropower activities, through the study and realization of new projects.

- in Alsace, in 2008 EDF announced a hydropower energy development plan over 5 years for a total capacity of 130 MW and for an amount of €225 million:
  - in 2008, EDF put the hydropower microplant at Brisach into service, with a capacity of 2.7 MW for a productible of 20 GWh/year. A similar project is being studied close to the Kembs dam, for a capacity of 8 MW and a productible of 28 GWh. In 2009, EDF participated in the commissioning of the Kehl micro-plant, located on the German bank of the Rhine, with a capacity of 1.4 MW;
  - the Gambsheim hydropower plant will be reinforced by the installation of an additional 28 MW group. This project will be realized in collaboration with EnBW, and construction is expected to start in 2010. A similar operation has been decided on the Iffezheim dam, on the German bank of the Rhine, for an additional group with a capacity of 38 MW to be put into service in 2012. Extension works of this plant started in July 2009;
  - the Gambsheim and Brisach projects are being implemented by CERGA, the Kehl and Iffezheim projects are being implemented by RKI, both companies being jointly and equally owned by EDF and EnBW;
  - in the Vosges mountains, the old hydropower station for the transfer of energy by pumping the *Lac Noir* should be replaced in 2015 by a modern plant with a capacity of 55 MW;
  - measures for the preservation of water resources and biodiversity will be implemented, notably with the realization of fish passes at Strasbourg and Kembs.
- a hydropower farm demonstrator on the Paimpol-Bréhat site in the Côtes d'Armor should be put into service by 2012. The aim of this 2 MW project is to test the principle of energy production from tidal currents, in real conditions;
- generation from reserved flows will continue to be developed. The purpose is to equip a certain number of dams in order to process the reserve flow through the turbines and recover a portion of the associated energy. EDF completed one project in 2007. In 2008, 4 projects were completed and 5 in 2009 for a capacity of 1.7 MW and a productible of 9.5 GWh. Other projects are under consideration for a total capacity of 18 MW and a productible of 130 GWh. The commissionings are expected between 2010 and 2014.

In addition, EDF's objective is to use all available opportunities for expansion, including:

- development of small hydropower plants (with less than 12 MW capacity). Therefore 5 small construction projects are being studied (Échirolles, Saut du Moine, Merlet, Rabuons and Plan du Var2) for a capacity of 10 MW and a productible of 40 GWh. The commissionings will be staggered between 2010 and 2013. Shema, a fully-owned EDF subsidiary, is studying five projects related to new facilities which should be built by 2012, representing a total capacity of 26 MW;
- technical and financial studies for pumped storage plants in France;
- a study of the possibilities for extra capacity building (e.g., increasing the power of existing hydropower plants) also permitted by the French law 2005-781 passed on July 13, 2005, which outlines energy policy guidelines (called the LPOPE; see section 6.5.2.2. ("French Legislation")), so as to help develop state-of-the-art processes. EDF is studying a project to increase the capacity of the La Bathie (Savoie) power plant by 45 MW by modifying existing groups; and
- upgrading existing facilities (modernization, more efficient generation, etc.) within the frame of concession renewals. In the context of renewing the Romanche concession, EDF has proposed a project to replace the 6 small existing plants construction with the construction of a new subterranean power plant (Gavet power plant) with a capacity of 90 MW and a productible of 540 GWh.

These hydropower development projects by the EDF group are fully consistent with the policies of the "*Grenelle de l'environnement*".

### 6.2.1.1.5 FOSSIL-FIRED GENERATION ("THF")

EDF's electricity production from its fossil-fired power plants in continental France represented approximately 3.6% of its total electricity production in 2009. This fleet, the average age of which is approximately 30 years, had in 2008 a total installed functioning capacity of 11,447 MW for a total installed capacity of 13,642 MW. Fossil-fired generation means have a certain number of advantages:

- a high degree of reactivity and flexibility (quick start-up and power modulation);
- the ability to be shutdown for extended periods (stand-by), or by contrast to be brought back into operation within short periods of time; and
- investment costs which are lower than for nuclear or hydropower facilities, and short construction periods.

In addition, the more modern fossil-fired power plants offer a better control of different sorts of emissions (carbon dioxide, sulfur dioxide, nitrogen oxide and dust).

Fossil-fired generation means are one of the essential components of the energy mix to ensure the balance of production-consumption in real time and to accommodate the variations in electricity consumption. Together with some hydropower facilities (lakes, pumped storage plants), the fossil fired generation means are used to cover mid-merit and peak demand electricity requirements.

For this reason, they play an important role in adjusting EDF's generation capacities in response to the changes of its customers' consumption (or demand).

The performance of these types of plants is nevertheless sensitive to various factors that can lead to higher generation costs:

- the tightening of environmental protection regulations (pollutant emissions, air quality);
- compliance with greenhouse gas emission quotas; and
- increases in the cost of fuel.

#### *6.2.1.1.5.1* EDF's fleet of fossil-fired generation facilities

***Breakdown of the facilities***

As of December 31, 2009, the fossil-fired generation facilities operated by EDF are of different types, both in terms of fuel and power:

- coal-fired units:
  - 9 units with an installed capacity of 250 MW, put into service between 1966 and 1971 (Blénod 2, 3 and 4, Bouchain 1, Le Havre 1, La Maxe 1 and 2 and Vitry 3 and 4);
  - 1 unit with an installed capacity of 585 MW, Le Havre 2, put into service in 1969;
- 3 more recent units (known as Q600), with a unitary installed capacity of 580 MW, put into service between 1983 and 1984 (Cordemais 4 and 5, Le Havre 4).
- oil-fired units:
  - 2 units with a unitary installed capacity of 250 MW, commissioned between 1971 and 1972 (Martigues 1 and 2);
  - 4 units with a unitary installed capacity of 585 MW, known as 600 MW oil-fired units, put into service between 1968 and 1975 (Porcheville 1, 2, 3 and 4);

– 4 units with a unitary installed capacity of 685 MW, known as 700 MW oil-fired units, put into service in 1976 and 1977 (Aramon 1 and 2, Cordemais 2 and 3).

- combustion Turbines (CTs): 10 units with a total installed capacity of 1,292 MW[1] on 4 sites (Vitry-Arrighi, Brennilis, Dirinon and Vaires-sur-Marne), put into service since 1980 (including the third unit of the Vaires-sur-Marne site of put into service in the end of October, 2009), which constitute resources for extreme peak periods and which are extremely responsive. These CTs are powered by domestic oil.

The installed capacity of the operating fleet is 11,447 MW.

Furthermore, besides the 4 units being mothballed in 2008, 4 other units were mothballed in 2009 (Martigues 3, Richemont 3 and 5, and the Combustion Turbines at Gennevilliers; the total capacity of mothballed units now amounts to 2,195 MW.

Therefore the total installed capacity of the fleet is 13,642 MW.

### *Fossil fuel supplies*

Fuel supplies are managed by EDF Trading, an EDF subsidiary responsible for fossil-fuel trading. Fuel consumption is determined for EDF's fossil-fired generation facilities on the basis of expected demand, and EDF places its orders to EDF Trading for delivery two months in advance for coal and one month in advance for oil (see section 6.2.1.3.3 ("EDF Trading")).

EDF has the opportunity to adjust its requirements and inventories by asking EDF Trading to make additional purchases or, under exceptional circumstances, to sell quantities that are considered surplus. In addition, for security reasons relating to supplying the power plants, EDF Trading has been asked to maintain a security inventory on behalf of EDF divided among various harbors.

## *6.2.1.1.5.2* Challenges relating to generation by fossil-fired facilities

### *Renovation of the most recent coal-fired production means to meet mid-merit load capacity demand*

For mid-merit load capacity, maintaining the most recent (i.e. most efficient) coal-fired units is the best solution to ensure availability of competitive capacities. EDF has therefore implemented in the last couple of years a program for the renovation and ensured reliability of the most recent 250 MW and 600 MW coal-fired power stations. This program will continue in the coming years.

The most recent 600 MW coal-fired units benefit from the lowest fuel generation costs of all of the fossil-fired generation facilities (better efficiency, seaside units, large capacity sites). Their power, along with the flexibility of their generation, are essential advantages. They are equipped with a gas flow desulfuration system (90% reduction in sulfur dioxide emissions) and a smoke denitrification system (80% reduction in nitrogen oxide emissions) for which construction finished during the second half of 2008. These treatments enable these units to comply with environmental regulations effective since 2008, and to respond to the tightening of regulations expected after 2015.

Finally, EDF foresaw that its nine 250 MW coal units, as well as the Havre 2 unit, will be stopped by December 31, 2015, due to environmental regulations.

### *Strengthening the fleet to meet peak demand, and preparing for the future of fossil-fired generation*

In order to meet the increase in peak demand over the coming years, EDF has implemented a program to increase its peak capacity. In 2005, EDF therefore decided to:

- put back into operation four 600-700 MW oil-fired units that had been mothballed, for a total capacity of 2,540 MW;

In spite of high variable costs, this method of generation remains competitive for peak and emergency periods (i.e., under 1,500 hours per year). Finally, in the period until 2015, the applicable regulations currently allow EDF to take into account the emissions for the entire fleet, and, thereby, to benefit from efforts made in relation to the 600 MW coal-fired units.
Except for the site of Martigues, which is subject to a specific regulation, the oil-fired units now use fuel at "Very very low sulfur content" (oil known as "TTBTS" with 0.55% sulfur content).

- put into service 1,064 MW of extreme peak capacity (several hundreds of hours of operation per year) via three combustion turbines;
- convert three oil-fired units of 250 MW each at the Martigues site into two combined-cycle gas turbines of 465 MW each, and build a 440 MW combined-cycle gas turbine at the Blénod site (*i.e.*, a net capacity increase of 620 MW).

These modernization projects will cut $CO_2$ and nitrogen oxide emissions and eliminate sulfur emissions.

As of December 31, 2009, a significant part of this program has been achieved and the following generation plants have been put into service since 2005:

- the four 600-700 MW oil-fired units, which were put back into service between 2006 and 2008;
- 690 MW of combustion turbines (129 MW of installed capacity at the Vitry-Arrighi site put into service in 2007, and 561 MW of installed capacity at the Vaires-sur-Marne, composed of 2 Combustion Turbines put into service in November 2008 ans 1 Combustion Turbine put into service in October 2009).

EDF therefore plans to increase its mid-merit and peak load installed capacity by a total of 4,224 MW after 2005. 3,230 MW of this is already in service. 994 MW of additional capacity is expected to be put into service after 2009:

- 374 MW of Combustion Turbines are currently under construction at Montereau. They are expected to be put into service at the end of 2010;
- the combined-cycle gas turbines are expected to be put into service in 2011 and 2012 for 620 MW.

For the post-2010 period, EDF is also looking into the possibility of developing new capacity for mid-merit load (combined-cycle gas turbines and coal-fired plants using state-of-the-art technology) in order to meet potential increases in mid-merit demand. For these developments, the EDF group's main advantages are that it owns the sites on which the fossil-fired power plants are located, and its industrial skills as an operator and a developer, acquired through international operations. Over the last few years, EDF has in fact been carrying out Independent Power Plant ("IPP") projects abroad.

Finally, the EDF group is participating in post-combustion and oxy-combustion harnessing projects with industrial partners, concerning CCS technology (Carbon Dioxide Capture and Storage), and studies concerning the transmission and storage of $CO_2$.

### *Evolution of the environmental regulatory framework*

Fossil-fired power plants are operated within the context of regulations that apply to installations classified for environmental protection purposes, as well as regulations relating to greenhouse gas emissions (see section 6.5.4.4 ("Other regulations relating to the environment, health, hygiene and safety") for a description of these regulations) and a specific regulation regarding air quality.

1 In 2009, the electrical power that can be injected into the network of 4 CTs (Brennilis 1 and 2, Dirinon 1 and 2) was increased to a total of 48 MW.

The regulations relating to greenhouse gas emissions led to the establishment, in 2005, of the national $CO_2$ quota allocation plan. During the first period (2005-2007), these quotas have covered the actual $CO_2$ emissions. For the 2008-2012 period, the quota allocations for the French electric sector have decreased by 25% (i.e., an allocation of 14.4 Mt per year for EDF).

In 2009, total emissions of EDF generation in mainland France were 15 million tonnes. EDF has suffered a deficit of 0.6 million tonnes, requiring the use of $CO_2$ emissions quota market.

The adaptation of its fossil-fired generation facilities, undertaken by EDF, is a result of the obligations imposed by regulations on air quality and reduction of airborne pollutants emissions, the principles of which are applicable until 2015. However, it cannot be excluded that the former regulations may be tightened for 2015 and future developments are an important challenge for EDF, in particular, with regards to the operation of its oil units beyond this date.

Thanks to the shutdown of the oldest fossil-fired power plants, the renovation of the most recent plants, the set up of pollution-reducing procedures and the use of fuel with a low sulfur content, EDF has set a target to reduce by 30% its emissions of $CO_2$ (measured in tonnes) between 1990 and 2020 and to reduce by 65% its emissions of SOx, NOx and dust between 2005 and 2020 (see section 6.5 ("Legislative and regulatory environment")).

***Generation and technical performance***

Fossil-fired generation represented 16 TWh in 2009, increasing by approximately 1.2% compared to 2008, primarily to partially offset the lower production of the nuclear fleet. Fossil-fired generation represents 3.6% of EDF's annual generation in mainland France.

The fossil-fired fleet's reliability has increased, with an availability ratio of 78.5% in 2009 (74.4% in 2008), a clear improvement over the last five years (64% in 2004) but also with unplanned outages (accidents and prolonged shutdowns) consistent with the objective: 8.6% in 2009 (10.2% in 2008).

Minimizing unplanned outages is the essential aim for generation means such as fossil-fired facilities, operating at mid-merit and peak. The goal for these generation methods, that are called upon throughout the year on a variable basis (EDF's fossil-fired power plants operate annually between 1,500 and 6,000 hours for coal, 200 and 1,500 for oil, and several hundreds of hours for combustion turbines) is to ensure the system's security through maximum levels of reliability and availability.

***Industrial partnerships***

On November 30, 2007, EDF and Enel signed a Memorandum of Understanding (MOU) in order to extend their partnership in nuclear power to other generation methods. In this context, EDF and Enel negotiate a drawing rights exchange agreement of 165 MW between France and Belgium, based on the economy of the means of CCGT generation developed respectively by each party.

***The decommissioning of the existing fleet***

EDF has planned all of the decommissioning operations for its existing fossil-fired generation facilities. The provisions for these operations have been made in an amount that corresponds to the cost of decommissioning all of the units being operated and the cleanup of the sites (see note 35.2 to the consolidated financial statements for the year ended December 31, 2009). However there is still a residual risk associated with increased cleanup requirements (development of applicable regulations, change in future use of the site requiring an additional cleanup process).

EDF continued throughout 2009 the decommissioning work started in 2006 on sites definitively shut down.

## 6.2.1.2 SALES AND MARKETING

EDF's sales and marketing activities in France are managed by the EDF Customers Division.

### 6.2.1.2.1 PRESENTATION OF THE MARKET IN FRANCE

#### *6.2.1.2.1.1* The demand

Domestic consumption in France (including Corsica) during the 2009 financial year totaled 486.4 TWh[1], a decrease of 1.6% compared to the 2008 financial year. Adjusted for the impact of climatic hazards and the leap year in 2008, this decrease is 1.8%: relatively sustained growth in the domestic customer market (about 2%) did not offset the decrease in consumption by large Business and Industry customers (a decrease of approximately 9% in 2009 compared to 2008, which was already affected by the crisis).

#### *6.2.1.2.1.2* The competition

Since July 1, 2007, the French market has been fully open for electricity sales and supply. All customers are free to opt for an offer from an EDF competitor at any time without notice.

EDF's main competitors on the French market are GDF SUEZ, SNET-E.ON, Atel, HEW Énergies, Poweo and Direct Énergie. Its n°1 competitor, GDF SUEZ, is one of the world's top power producers. It has significant nuclear and natural gas resources and is seeking to develop its generation capacities further. GDF SUEZ has almost 10 millions customers in France and is the top supplier of natural gas.

A market entrant, Direct Énergie, has built up a portfolio of 500,000 customers since 2003 and has developed Neoen, a subsidiary dedicated to renewable wind and photovoltaic energies.

Lastly, Poweo, which recently strengthened its relationship with the Verbund group, an Austrian hydro-electricity producer, is a power generator, with a portfolio of 370,000 customer sites in 2009.

In order to provide supplies for the open market, suppliers that are competing with the EDF group have access to:
- their own generation capacities;
- almost 38 TWh made available in 2009 by the EDF group through "Capacity Auctions" (VPP) described in section 6.2.1.3.4 ("Capacity auctions");
- imports;
- the wholesale electricity market.

Furthermore, the decision of the *Conseil de la concurrence*, now called *Autorité de la concurrence*, on December 10, 2007, accepted and rendered mandatory the commitments proposed by EDF on making available to alternative energy suppliers a substantial volume of electricity (see section 6.2.1.3.6 ("Supplying electricity to alternative suppliers in France") below).

As of December 31, 2009, according to the Energy Regulation Commission ("CRE"), alternative suppliers had 4% market share in residential sites and 13% in non-residential sites[2].

As part of the shift in the competitive landscape in France, the Government on October 24, 2008, appointed a commission chaired by Paul Champsaur *"to reflect on the tariff structure and the legislative and regulatory changes needed to provide France with a transparent and stable electricity market framework that protects consumer interests and fits within a European context of more open electricity markets"*.

1 Source: RTE-EDF Transport 2009 provisional balance sheet, including Corsica.

2 *Commission de Régulation de l'Énergie : L'Observatoire des marchés de l'électricité et du gaz* Q4 2009.

The Champsaur Commission report was published on April 24, 2009. One of its proposals is *"to grant any supplier access to basic electricity at a regulated price reflecting the economic conditions of the incumbent nuclear infrastructure for a volume proportional to its customer portfolio in France[2]"*. A public consultation period was then opened, and stakeholders were asked to present their views. Prime Minister François Fillon announced in a September 15, 2009 press release that he wished to undertake reform with the three following main objectives:

- to preserve "regulated" sales tariffs for residential and small business customers;
- to ensure the financing of the existing power generation infrastructure and promote new investments, in accordance with the Government's "Grenelle" environmental initiative;
- to promote competition through a regulatory mechanism that will allow all power suppliers in France to obtain supplies from EDF on the economic terms of the incumbent nuclear infrastructure. The resulting market dynamics are expected to lead to the elimination of regulated rates for major customers in 2015[3].

In line with this report, the Government has begun drafting a bill that was handed down to the French Council of State in late March, for final adoption by the Parliament announced by the end of the year 2010.

#### *6.2.1.2.1.3* Contracts at regulated rates, contracts at transitory tariff for market adjustment and market condition contracts

In the context of the opening energy market, the following distinctions must be made with respect to sales of electricity in France:

- contracts at regulated tariffs, which are offered only by historical suppliers;
- contracts at the transitory tariff for market adjustment (*Tarif réglementé transitoire d'ajustement du marché*, or TaRTAM). To have access to TaRTAM contracts, customers must first have exercised their rights to eligibility on the site(s) concerned by the request;
- market condition contracts offered by both historical and alternative suppliers.

#### *6.2.1.2.1.4* Contracts at regulated tariffs

##### *Acces to tariffs*

The principles defining the entitlement to the tariff were modified by the law of January 21, 2008, on regulated tariffs for electricity and natural gas. The situation, per category of customer, is now diversified:

- residential customers:
  - who exercise their right of eligibility are again entitled to benefit from regulated tariffs (for the same residence) 6 months after such exercise, provided they submit their request before July 1, 2010 (electricity only);
  - who move are entitled to benefit from regulated tariffs, including when the previous occupants of the residence have exercised their right of eligibility, provided they submit the request before July 1, 2010 (electricity and gas);
  - who move into a new residence are entitled to benefit from regulated tariffs, provided the residence is connected to the distribution network before July 1, 2010 (electricity and gas).
- non-residential customers signing up for a power supply equal to or less than 36 kVA:
  - who exercise their right of eligibility for a site cannot revert to regulated tariffs for this same site (electricity and gas);
  - who move are entitled to benefit from regulated tariffs, including when the previous occupants of the site have exercised their right of eligibility, provided they submit the request before July 1, 2010 (electricity only);
  - who move to a new site of consumption are entitled to benefit from regulated tariffs provided the site is connected to the distribution network before July 1, 2010 (electricity only).
- non-residential customers who have signed up for a power supply of more than 36kVA:
  - are not entitled to benefit from regulated tariffs except for consumption at a site where eligibility has never been claimed (neither by them nor by a previous occupant) (electricity and gas);
  - who move to a new site of consumption are entitled to benefit from regulated tariffs provided the site is connected to the distribution or transmission network before July 1, 2010 (electricity only).

Senator Poniatowski introduced a bill to increase the timeline for the right of some customers to return to regulated tariffs. The bill adopted on first reading by the French Senate on March 25, 2010 perpetuates, without any limitation in time, all the rights previously limited to July 1, 2010, except for new sites whose subscribed power is greater than 36 kVA that can benefit from the regulated tariffs if they are connected to the public network before December 31, 2010. The bill will be reviewed by the French National Assembly in the beginning of May 2010.

##### *The tariff structure and the principle of the integrated tariff*

The tariff structure includes a range of regulated tariffs applicable to electricity sales. Changes in these tariffs are determined by the Minister of the Economy, Industry and Employment and by the Minister in charge of the Energy, after consultation with the CRE.

These regulated tariffs include a fee for making the capacity available and a variable portion that is proportional to consumption, with prices that may be adjusted depending on the time of day or the season. The range of tariffs has been designed to take into account changes in customers' consumption with various options (peak hours/off-peak hours for residential customers, for example).

In addition, within the context of its mandate as an operator with public service commitments, EDF has been offering a basic necessity tariff for electricity since January 1, 2005, in accordance with Decree n° 2004-325 of April 8, 2004.

Finally, Decree n° 2008-778 of August 13, 2008, created a special solidarity tariff for gas carried by all suppliers and financed by a contribution that will be passed on to end users.

The tariff is a said "integrated" because it covers all of the following elements:

- the "supply" portion (approximately 60% of the bill, excluding taxes) including:
  - the "energy" portion, based mainly on operating costs and long-term costs (investments in generation capacity, the back-end of the cycle, research and development); and
  - the management costs for customer service and sales.
- the "network" portion (approximately 40% of the bill, excluding taxes) including the cost of using the public transmission network operated by RTE and the public distribution networks operated by distribution network operators, also called the "delivery" portion.

Customers benefiting from integrated tariffs receive a single electricity bill for supply and delivery. This bill indicates the network usage cost portion calculated on the basis of the tariff for using the, public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE"), established upon the proposal

1 Assignment letter, October 24, 2008.

2 Commission report on organizing the electricity market, chaired by Paul Champsaur, April 2009, page 18.

3 Prime Minister: Press relations department, Press Release, Paris, September 15, 2009.

of the CRE (see section 6.2.2.4 ("Tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")") below). In this way, the separation of the generation and sales and marketing activities in a competitive market, and transmission and distribution activities, which are a monopoly, is clearly shown.

The following taxes and contributions (representing more than 20% of the bill, including taxes) are added to the electricity bill:

- local municipal and departmental taxes, collected and transferred by EDF to local authorities; the transposition of directive 2003/96/EC of October 27, 2003, that restructured the Community's framework for taxing energy production and electricity will lead to a reform in local taxes on electricity;
- the CTA levy *(Contribution Tarifaire d'Acheminement)*, which contributes to covering a portion of the fees for the pension system (see section 17.6.3 ("Special pension system") below) and which previously appeared in the tariff structures. It was extracted during the tariff movement in summer 2009;
- Contribution to the public service charges for electricity (*Contribution aux charges de service public de l'électricité*, or "CSPE"), which was established by the law of January 3, 2003 (see section 6.5.1.2 ("French legislation") below). The CSPE was set at €4.5 per MWh for 2008 and maintained at this level in 2009 in the absence of order. It is ceiled at €500,000 per consumption site and per year; in addition the total amount due for this contribution from any industrial company consuming more than 7 GWh of electricity per annum is capped at 0.5% of its added value;
- VAT, Value Added Tax.

***Multi-annual revision in electricity tariffs***

In accordance with Article 1 of the law of August 9, 2004, one of the public-service contract's commitments deals with the multi-annual revision of electricity tariffs for residential customers. Article 4 of law n° 2000-108 of February 10, 2000, states that regulated tariffs must cover *"all costs borne [...] by EDF and its non-nationalized distributors"*.

To comply with these provisions, the French State and EDF have agreed, as part of the Public service contract (see below), on the need to *"gradually shift built-in rates, so that the general tariff structure and the structure intrinsic to certain tariff options reflect the cost structure"*.

The Electricity Pricing Order of August 14, 2009 implements an average 1.9% increase in regulated electricity prices for Blue tariffs, excluding tax (or €1.6 excluding tax on average per MWh[1]) 4% for Yellow tariffs, and 5% Green tariffs. No increase was granted for TaRTAM. Tariffs on the whole rose by an average of 2.3%, but the increase is uneven, as it comes with a reform of the tariff structure, with different changes in the basic fee portion and the consumption portion (see section 6.2.1.2.1.5 ("TaRTAM contracts")).

This increase is in compliance with the Public service contract entered into between the French State and EDF on October 24, 2005, which guarantees that the average increase in electricity sale tariffs for residential customers will not be higher than the inflation rate in the first five years after the signing of this contract (see section 6.4.3.4 ("Public service in France")).

#### *6.2.1.2.1.5* TaRTAM contracts

Article 15 of the law n° 2006-1537 of December 7, 2006, relating to the energy sector provided for the creation of a regulatory transitory tariff for market adjustment (TaRTAM) and its implementation for a period of two years for every customer having exercised their eligibility. Customers had until July 1, 2007, to send their written request for application of this tariff to their energy supplier(s). The order of January 3, 2007, specifies that the regulatory transitory regulated tariff for market adjustments before tax applicable to a delivery point should be equal to the regulated sales tariff before tax applicable to a delivery point having the same characteristics, marked up as:

- 10% for end users connected to low voltage with a subscribed power lower than or equal to 36 kVA;
- 20% for end users connected to low voltage with a subscribed power strictly higher than 36 kVA;
- 23% for end users connected to HTA and HTB voltage.

The law n° 2008-776 of August 4, 2008, on the modernization of the economy has extended this tariff structure until June 30, 2010. Customers who currently benefit from TaRTAM will automatically be entitled to continue to benefit from it until that date. The law also permits customers who have not already done so to request the application of TaRTAM. Finally, the law stipulates that when customers relinquish TaRTAM, they cannot subsequently claim it again. The Public Authorities did not grant an increase on the TaRTAM contracts during the tariff movement in 2009, thus separating the TaRTAM level and the sales regulatory tariff, originally the basis of its calculation. As of December 31, 2009, approximately 3,500 sites are charged at TaRTAM. They represented an annual consumption of 72 TWh[2].

***Current litigation between the French State and the European Commission regarding the compatibility of tariffs with the European regime regarding the State aids***

The European Commission has stepped up the investigation of the French State that it began on June 13, 2007, regarding to the Government assistance to some large and medium-sized companies in France in the form of regulated electricity tariffs. The investigation has broadened into the decision to extend TaRTAM to June 30, 2010, as well as the opening of this mechanism to new beneficiaries[3].

#### *6.2.1.2.1.6* Market-rate contracts

Since July 1, 2007, all customers in France have been free to abandon the tariff schedule for an EDF offer or that of another supplier at any time, without notice.

With the exception of customers connected to the transmission network, who must sign different contracts for transmission and delivery, all other customers who have exercised their right of eligibility may enter into a single contract with the distributor of their choice for the supply and delivery of their electricity. Their electricity bill includes the electrical energy supply price, called the Tariff for Using the Public Electricity Transmission and Distribution Networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité,* or "TURPE"), and public levies: the CSPE, the CTA (until the tariff movement of August 2009), local taxes and the VAT mentioned in section 6.2.1.2.1.4 ("Contracts at regulated tariffs – The tariff structure") above.

### 6.2.1.2.2 CUSTOMER DIVISION

#### *6.2.1.2.2.1* Introduction and marketing strategy

EDF markets energy and services to more than 26.2 million customers in France (excluding Overseas departments and Corsica), or almost 32 million sites.

In 2009, the Customer Division's electricity market sales came 400.4 TWh[4].

1 Source : deliberative opinion of the *Commission de Régulation de l'Énergie* dated August 10, 2009 on the draft order relating to regulated tariffs for electricity sales, page 3.

2 *Commission de Régulation de l'Énergie: L'Observatoire des marchés de l'électricité et du gaz* Q4 2009.

3 Press release; reference IP/09/376, March 10, 2009.

4 Data exclude internal sales, sales to foreign operators and notifications of block trades, including Eurodif contract processing, adjusted for cut-offs.

In 2009, EDF's market share on the electricity market with end customers in terms of volumes sold was 85.2%[1], vs. 85.5% in 2008.

Since 2005 EDF has offered natural gas to all eligible customers. In 2009, the Customer Division sold 18.5 TWh to 537,000 sites. As of the end of 2009, the Customer Division supplied gas to about 530,000 customers, including 438,000 residential ones.

In 2009, EDF's market share on the gas market with end customers in terms of volumes sold was about 3.75%[2], vs. less than 3.7% in 2008.

The retail gas market in France has 11.48 million sites, with consumption of 496 TWh. Residential customers (94% of sites) account for 28% of end consumption. 1,144,000 residential sites have opted for the market price, including 637,000 with alternative suppliers. 243,000 non-residential sites have opted for the market price, including 113,000 served by alternative suppliers[3].

The Customer Division had 11,858 employees as of December 31, 2009.

Downstream, the EDF group intends to be the leader in high-performance low-carbon energy solutions by partnering with its customers and local Governments to build an energy world with less $CO_2$.

To meet this objective, the Customer Division offers options that are better suited to new environmental challenges. An energy efficiency option, for example, is now included with the supply of electricity, through:

- a supply offer (at regulated or market rates) that provides an incentive to manage demand and smooth out peaks in consumption;
- development of efficient electricity use (heat pumps, electrical vehicles, etc.);
- assistance in steering consumption. Pro-active management of consumption will gradually be possible using digital technologies and connected meters, which are currently in the experimental stage (see section 6.2.2.2.2 ("Electricity Market: connected meters project")).

In addition to its electricity supply offers, the Customer Division assists its customers in their complex energy projects by advising them and putting them in touch with *Bleu Ciel d'EDF* partners (builders, installers and thermal renovation professionals). The aim is to assist customers in making the best choice for their own situation, so that they can better control their energy expenditure. It also aims to meet the objectives of the "LPOPE" of July 13, 2005 on energy policy guidelines and the associated application decrees. With a total volume of 29.8 TWh Cumulative Discounted (*Cumulée actualisée,* or "CUMAC") allocated, EDF has met its energy savings certificates obligations for the first obligation phase, which ran from July 1, 2006 to June 30, 2009. The second phase, which runs from 2009 to 2012, is likely to increase the obligation volume (see section 6.5.1.2 ("French legislation")).

To best meet its customers' energy needs, EDF relies on its nationwide presence. EDF has 26.2 million customers throughout France. This gives it a compelling link with most of France's population, its industrial base, and all its local authorities and concession-granting authorities. EDF's broad footprint also helps it put public service values into practice, including proximity to the customer, continuity of service, professionalism and solidarity.

For example, in serving disadvantaged customers, EDF aims to assist the public authorities in combating energy insecurity by maintaining access to energy. This includes promoting and implementing low energy prices, assisting distressed customers and preventive measures through partnerships with associations.

1 Excluding Overseas departments and Corsica; excluding network losses, including EDF's own consumption.

2 French market source: data published by the French agency for energy and raw materials (DGEMP).

3 Source: *Commission de Régulation de l'Énergie: L'Observatoire des marchés de l'électricité et du gaz* Q4 2009.

EDF's marketing policy also aims to enhance customer loyalty by maintaining quality service and a high level of satisfaction. EDF's performance on various market segments is measured by an index and qualitative and quantitative surveys. By focusing on telephone availability and the quality of claims processing, EDF has managed to keep residential customer statisfaction stable since the end of 2007, in spite of the spin-off of the distributor. In 2009, a challenging business context is one reason for lower satisfaction ratings in the business and small business customer segments. Improved customer relations and claims processing remain priorities for 2010.

Lastly, the Customer Division is pursuing its efforts to enhance its operating performance, which will require, among other things, a multi-channel customer relationship and marketing strategy.

### *6.2.1.2.2.2* Activity by market

#### *A. RESIDENTIAL AND SMALL BUSINESS CUSTOMER MARKET*

EDF's 25.95 million residential and small business customers come under its Residential and Small Business Customers Division.

In 2009 the division sold 158.8 TWh of electricity[4] and 5.5 TWh of natural gas.

At the end of December 2009, it had 438,000 residential gas customers and 83,000 small business gas customers.

EDF's sales and market strategy for its residential customers is based on energy efficiency, environmental protection and home comfort.

For its business customers, EDF offers a range of options combining supply and services. The aim is to make its customers' lives easier by offering them economical, low $CO_2$ energy solutions. Its range of services and check-ups allow business customers to focus on running their businesses and enhancing their performances.

*Energy supply*

EDF aims to meet its customer's needs by offering to be their sole supplier of electricity and natural gas.

Thus, since 2005 EDF has offered its small business customers natural gas, and since July 1, 2007 it has offered its residential customers gas and electricity at market price – *"Mon contrat gaz naturel"* (My natural gas contract) and *"Mon contrat électricité"* (My electricity contract).

To sell its services on the mass market (30 million incoming calls, 130 million customer bills annually), EDF has developed several contact and marketing channels, including several hundred sales reps, more than 100 agencies throughout France, almost 70 Customer Relationship Centers (CRCs) providing service 24 hours a day and seven days a week, several hundred field salespersons, an automated voice portal, a website and a network of approximately 5,000 "*Bleu Ciel d'EDF*" thermal comfort partner-installers.

In 2009, EDF stepped up efforts to enhance the performance of these marketing and contact channels, including CRC renovations, a new website, a complete refurbishing of certain agencies, etc.

*The offers*

*1. The BLEU CIEL D'EDF offers on the residential market*

The *Bleu Ciel d'EDF* brand covers all offers and services for residential customers:

- *"autour de la fourniture"* (supply plus) services: safety of indoor installations (*Diagnostic Confiance Sécurité*), assurance (*Assurélec*), consumption management (*Suivi conso*), break-down assistance, payment solutions, etc.;

4 Including Blue tariff sales managed by the Residential & Small Business Division on behalf of the Business Customers Division.

- *"autour des moments-clés"* (life milestone) services, for example, for when customers move to a new home or undertake construction and thermal comfort projects. The range includes construction advice and price quotes (*"Objectif Travaux and Estimation Travaux"*), check-ups, personalized assistance and financing offers for all home comfort projects, including upkeep and servicing of installations provided by *Bleu Ciel d'EDF* partners;

EDF has set up several marketing partnerships to back these offers:

- the partnership with Cardif aims to set up a group insurance agreement (*Assurélec*) to cover payment of electricity bills in the event of the death or disability of an EDF customer taking out this insurance;
- the partnership with Crédit Foncier aims to offer residential customers a "new home environment loan" (*Prêt habitat neuf*) prior to a construction project that complies with the technical requirements of *Bleu Ciel d'EDF*. This loan is a particularly advantageous financing solution for installing heating equipment.

In addition, an agreement has been set up with Axa Assistance and Europe Assistance for repair services for both residential and business customers.

### *2. EDF PRO offers on the business customer market*

EDF has grouped all its offers to business customers together under the EDF Pro brand. EDF Pro aims to make its customers' lives easier by offering them advice and solutions for better controlling their energy consumption, optimizing their bills, receiving repair services and helping the environment while reconciling performance and business continuity. EDF Pro also offers its business customers a kWh *Équilibre* ("balance") option, under which for each kWh bought, the company pledges to produce one kWh from renewable energy sources.

While all small business customers share the same concerns (enhanced energy performance, expertise, reliable supplies), each sector of activity and each trade has its own special needs. To deal with such diversity, EDF Pro offers a set of services and options that are best suited to the expectations of all its business customers in lighting, heating and air-conditioning. EDF also helps business customers who plan to move or to renovate their commercial premises.

#### *Earning energy savings certificates ("certificats d'économies d'énergie")*

Regarding residential and business customers, energy savings certificates are earned from:

- offers of home-thermal renovation solutions (heating, hot water, insulation and ventilation) using environmentally sound materials. In addition to advice and check-ups, customers are put in touch with *Bleu Ciel d'EDF* partners, who handle and coordinate the general contracting. EDF has thus assisted almost 500,000 renovations over the last three years;
- EDF's partnership strategy, under which qualified small construction and renovation professionals are granted *Bleu Ciel d'EDF* partner certification under certain terms. Certification involves the granting of a brand license that states the precise conditions and sets the royalty that the partner pays to EDF. This network of partners allows customers carrying out construction or renovation work to have access to approximately 5,000 professionals in all aspects of the building trade, all of whom are committed to energy efficiency, alongside EDF.

These partners make a significant contribution to the earning of energy savings certificates and energy efficiency training and promotion initiatives like:

- FEEBAT (*Formation aux Économies d'Énergie des salariés et artisans des entreprises du Bâtiment,* or Energy Savings Training for Construction Craftsmen and Companies): this mechanism was designed in tandem with professional construction organizations and ADEME (Environment and Energy Efficiency Agency) to develop companies' ability to address the thermal renovation market. Since 2008 it has trained more than 20,000 professionals, thanks to EDF funding under the energy savings certificates mechanism;
- the distribution of almost 10 million low-energy light bulbs in 2009 and 2010 under an agreement with the Ministry of the Ecology, Energy, Sustainable Development and the Sea ("MEEDDEM", hereinafter), ADEME, Recylum, FMB (*Fédération des Magasins de Bricolage* or Federation of DIY Stores), FCD (*Fédération des Commerces de Distribution* or Federation of Retail Stores).

#### *Solidarity policy*

EDF has many initiatives in progress throughout France, particularly in preventive measures, to make customers more aware and responsible in managing their energy budget.

Low-income customers, for example, are given access to subsidized energy prices in the form of a reduction in their electricity and natural gas bills, as well as free installation. As of the end of 2009, 940,000 homes in continental France, Corsica and Overseas departments were under the *Tarif de Première Nécessité* (TPN, or Basic Necessity Tariff), or 225,000 more than at the start of the year, and 8,800 were under the *Tarif Spécial de Solidarité Gaz* (or, Special Solidarity Rate on Gas).

In 2009, EDF also raised its annual donation to the *Fonds de Solidarité* pour le Logement (FSL, or Solidarity Fund for Housing) by 10% to €22 million. These funds pay all or part of the electricity bills of customers who are encountering difficulties and helps clear away unpaid bills.

To be closer to disadvantaged people, EDF also supports initiatives to increase awareness of energy efficiency and home renovation through numerous partnerships with associations, low-income housing agencies, and others by providing financial assistance and sharing its energy skills. More than 16,000 people have received training or information on energy efficiency since 2008. In November 2009 EDF joined the Fondation Abbé Pierre to create low-utility, low-income, environmentally friendly housing units that are accessible to the poorest families under the foundation's "2,000 homes for 2,000 families" program. The aim is to offer homes to 2,000 families who currently live in substandard housing, by 2011 and to prevent energy insecurity. EDF helps fund energy efficiency investments in this type of housing and leads energy efficiency awareness campaigns with families.

## *B. BUSINESS CUSTOMER MARKET*

The Business Customers Division has more than 227,000 customers, with sales of 220.2 TWh[1] of electricity 2009 and 13 TWh of natural gas.

EDF assists its business customers in managing their energy, regardless of their sector of activity, their size or their organizational set-up. It aims to make energy performance an integral part of the overall performance of business customers, both economic and environmental performance. To this end, in 2009, EDF set up the *Observatoire des Énergies d'Entreprise*, a forum to better understand the behavior of companies towards energy.

The recession has led to a decline of about 8% in business customers' consumption vs. 2008 and to an increase in unpaid bills and doubtful receivables. Customers experiencing declining business have reacted mainly by requesting that contracts be adjusted accordingly in the areas of power levels and consumption commitments, that payment terms be made more flexible, and that advice and services be provided to reduce their energy bills.

Since the start of 2009, EDF has adjusted its offers, while managing the risk of unpaid bills by setting up special assistance in the event of non-compliance with consumption commitments and gas and electricity power level commitments (mainly for industrial business customers) or cash flow difficulties.

1 Excluding Blue Tariffs managed by the Residential & Business Division on behalf of the Business Customers Division.

Lastly, EDF has routinely contacted institutional and economic players throughout France (*préfectures*, Chambers of Commerce and Industry, professional associations, etc.) to explain these measures.

Certain customers, called "Key Accounts" are unique in their intensive power consumption and in the large proportion taken up by electricity in their operating costs. Long-term contracts for the supply of electricity with major industrial customers have been investigated by the European Commission (see section 20.5 ("Legal and Arbitration Proceedings")).

Meanwhile, EDF and Exeltium, a consortium that includes large-volume consumers of electricity, signed an industrial partnership agreement on July 31, 2008 relating to long-term electrical energy supplies over the long term. This contract, which covers the supply of volumes over a 24-year period, enables EDF to optimize the operating conditions of its generating plants. The definitive version of this contract followed an extended dialogue with the European Commission, whose comments required an adjustment to the initial agreement to ensure that it complied with the Community's competition law. Furthermore, the implementation by Exeltium of the financing mechanism of this agreement has been slowed by the recession. The EDF group and Exeltium completed on March 25 the conditions for the two-phase implementation of this partnership agreement, whereby electricity supplies to about a hundred of French industrial sites at approximately half of the rights of their agreement will start on May 1, 2010.

The Local Distribution Companies (LDCs) sell and deliver electrical energy to end users located in their exclusive area. They are responsible for 5% of the electricity distribution in France and sometimes generate electricity themselves. The decree of January 27, 2005 relating to the tariffs for the sale of electricity to non-nationalized distributors gives the LDCs the option of obtaining special tariffs from EDF for the portion of their electricity supply sold to customers that have not exercised their right of eligibility, as well as for their network losses.

*The offers*

EDF has developed a range of services especially for its largest customers, as well as to major companies and small and medium-sized companies and industries: dedicated management services, assistance in day-to-day management of contracts and controlling energy expenditure and consumption.

EDF has also set up dedicated services for Key Accounts, including:
- European-scale assistance through EDF group subsidiaries. EDF has a "Large Business Customers and Key Accounts" marketing network for managing large business customers who operate on a European scale and have a centralized purchasing structure. This coordinated, 11-country network offers multi-country energy solutions;
- assistance in controlling their energy consumption and their $CO_2$ emissions through progress contracts, which are backed by EDF's expertise in environmentally efficient solutions in industrial processes and utilities, and propose initiatives, while guaranteeing their results. These initiatives lead to energy savings investments that often result in energy savings certificates.

Since 2005, EDF has marketed a full range of gas supply offers to its business customers. EDF offers its customers a single contact and simplified management of electricity and gas contracts. The gas offer features management and advisory services, including Internet monitoring, annual consumption assessments, energy savings check-ups and other services.

*Earning of energy savings certificates*

In the Business and Local Authorities markets, EDF offers personalized, efficient eco-solutions for customers from all sectors of the economy, including industry, private service companies, Government buildings, and local authorities.

EDF assists its customers in planning and implementing their energy efficiency projects in three areas: building insulation, installation of energy-efficient or renewable-energy equipment, and enhancement of industrial processes, in tandem with its energy efficiency subsidiaries. The services offered are tailored to customer expectations and include audits, engineering and detailed studies, equipment delivered and installed, operating services and maintenance of newly installed equipment, financing options and remote monitoring of energy efficiency, etc.

### *C. Local authorities and low-income housing operator market*

The Local Authorities Division (Division Collectivités Territoriales, or DCT) manages more than 54,000 customers, including:
- local governing bodies: communes, public inter-commune establishments (metropolitan Governments, Governments covering both metropolitan areas and communes, inter-commune agencies), regional and departmental councils, establishments associated with local governing bodies (high schools and junior high schools, public retirement homes, etc.);
- public- and private- sector low-income housing agencies.

Local Authorities Division customers account for about 1.1 million electricity contracts, including 250,000 for low-income housing agencies with annual consumption of 21.4 TWh, 600 natural gas contracts and annual consumption of 690 GWh. Law n°2009-967 of August 3, 2009 regarding the implementing of the "Grenelle" environmental initiative gives local authorities a major new role in local energy policies. In this context, EDF has strengthened its local footprints by offering each authority, regardless of size, a designated local contact person. This personalized relationship mechanism, which now involves more than 200 EDF contact persons, will be expanded to low-income housing agencies in 2010.

In 2009, The Electrical Transport and Vehicle division (DTVE) was folded into the Local Authorities Division. This new organization aims at consolidating and developing synergies between the two entities. The support missions for the development of territorial projects undertaken by the DCT may contribute greatly to the success of DTVE projects. Meanwhile, transmission constitutes a major challenge for local authorities, the attachment of the DTVE to the DCT to allow the EDF group to facilitate transmission offers to local authorities, complementing its range of offers.

*Offers and solutions*

The offers include:
- the supply of electricity and natural gas, including an "*Équilibre*" offer for electricity produced from renewable energy sources;
- dedicated management services, particularly the ability to monitor costs and consumption online and the sending of email alerts in the event of aberrations in consumption, electronic billing and the remittance of billing data via EDI (Electronic Data Interchange);
- a Cost amount offer (*Offre montant de charges*, or OMC) designed for low-income housing agencies. Its aim is to enhance energy efficiency in low-income housing and allow EDF to earn energy savings certificates. In 2009, 64,200 low-income housing units were assisted with this offer;
- check-ups (management of energy demand, development of renewable energy);
- the signing of agreements with local authorities to earn energy savings certificates. Some local authorities have been granted responsibilities in the area of energy, and they coordinate specific initiatives in Energy Demand Control (EDC) and renewable energy sources in their geographical areas;
- energy efficiency offers, such as the "*Analyse Energétique Patrimoine*", which helps them to meet very stringent energy and environmental criteria and to better plan their renovations investments to meet the very tough standards of the *Grenelle de l'Environnement*.

*Promotion of electrical vehicles*

The EDF group has begun to promote electrical vehicles, in order to assist its customers in shifting to sustainable forms of transportation that helps meet $CO_2$ reduction objectives.

It has developed an active partnership strategy that is open to the various technological solutions developed by manufacturers, including both electrical vehicles and rechargeable hybrid vehicles, in tandem with national players such as Renault and PSA, and forerunners such as Toyota, the leader in rechargeable hybrid vehicles.

These partnerships were reinforced in 2009 with major experiments, including rechargeable hybrid vehicles in Strasbourg with Toyota, electrical vehicles in the Paris region with Renault, and mostly-electrical rechargeable hybrids with PSA.

Also in 2009 the French Government launched its "carbon-free" vehicle plan, the main points of which deal with the roll-out of recharging infrastructure (4.4 million recharging stations by 2020), a joint call for bids by a group of companies and public bodies for 100,000 electrical vehicles over five years, and the construction of a battery plant at Flins (Renault-FSI-CEA).

The EDF group has invested in this initiative, including purchasing 5,000 of the 100,000 vehicles announced by the French Government, and setting up a subsidiary to assist local governing bodies in rolling out public recharging infrastructure.

*Concessions*

EDF is represented by its Local Authorities Divisions in signing concession contracts for the "supply" portion (see section 6.2.2.2.3 ("Concessions")).

#### *6.2.1.2.2.3* Service subsidiaries to support the development of energy efficiency

In March 2006, EDF decided to step up the Group's commitment to energy efficiency services.

Service subsidiaries help meet this objective with various customer categories (Residential, Small Business, Business and Local Authorities) and cover a broad scope of activities, including studies, construction, equipment maintenance, investment financing and backing in obtaining authorizations and subsidies.

The portfolio of service subsidiaries has resulted from successive stakes taken out in existing companies, as well as from the spin-off of businesses that EDF developed itself.

***EDF Optimal Solutions***

The energy efficiency activities developed by EDF in the business and local authority market, in particular through a business partnership with Schneider Electric, were transferred at the start of 2009 to an EDF subsidiary, EDF Optimal Solutions (EDF OS). Wholly owned by EDF, EDF OS is a service integrator whose product offer is marketed both in the form of packaged solutions (the Excelis range providing responses to meet increased energy needs or to adapt transformers) and as global energy efficiency multi-technique and multi-energy solutions tailored specifically to customer needs. EDF OS thus takes charge of the whole project on behalf of the customer (design, construction work, maintenance, financing options, environmental permitting etc.) and provides access to skills across the EDF group through its other units including EDF EN, EDF ENR, Everbat and Netseenergy.

EDF OS also markets energy efficiency contracts (CPEs) with a commitment to results as to the volume of energy savings achieved and the financing of all or part of the investment required to achieve such energy savings.

***EDF Énergies Nouvelles Réparties***

(See section 6.4.1.1.3 ("Other holdings in the renewable energy sector")).

***Domofinance***

Domofinance is a company set up in 2003 and licensed as a financial company by the *Comité des Etablissements de Crédit et Entreprises d'Investissement* (CECEI) on September 29, 2003, pursuant to articles L. 511-9 to L. 511-14 of the Monetary and Financial Code.

EDF owns 45% of Domofinance; 55% is controlled by CETELEM (BNP Paribas group).

Domofinance meets the financing needs of residential customers who wish to integrate efficient energy solutions into their home renovation projects. In particular, it markets the EDF Bleu Ciel Renovation Loan (*Pré Rénovation Bleu Ciel d'EDF*).

In 2009, Domofinance granted more than 40,000 loans.

***Fahrenheit***

Company wholly owned by EDF, Fahrenheit performs maintenance work on central heating and hot water systems for residentials, offices, rent-controlled housing managers, and for jointly owned properties. It main trademark is "*Chaleur Maintenance*" (CHAM).

Fahrenheit develops in the field of maintenance of heat pumps (PAC).

***Bastide-Bondoux***

Bastide-Bondoux is a research firm that is wholly owned by EDF wich carries out thermal analyses and which provides advisory and optimization services for its customers, who are private housebuilders.

***Everbat***

Company wholly owned by EDF, Everbat, acts as a package builder for the technical aspects (heating, cooling, hot water, photovoltaic, etc.) of public and private calls for competitive tenders from local authorities, real estate developers, social housing managers, and industrial companies.

***Netseenergy***

Company wholly owned by EDF, Netseenergy historically develops and produces the Adviso range of services offering customers access to an online graph of their consumption load curves.

Since 2008, the company bears the project of development of teleservices on the business market.

***Tiru***

See section 6.4.1.2 ("Tiru").

### 6.2.1.3 UPSTREAM/DOWNSTREAM OPTIMIZATION – TRADING

#### 6.2.1.3.1 ROLE AND ACTIVITIES OF DOAAT

The primary function of the Upstream/Downstream Optimization & Trading Division (*Direction Optimisation Amont/Aval & Trading*, or "DOAAT") is to ensure an equilibrium for electricity and gas between upstream resources and EDF downstream outlets in France, and to maximize the gross margin

of the integrated upstream/downstream entity:

- upstream resources: fleet of generation facilities, long-term electricity and gaz supply contracts, wholesale purchasing, purchase obligations from small decentralized generators; and
- downstream resources: long-term supply contracts, sales to end users, wholesale market sales, production capacity auctions (VPP), sales to alternative suppliers in France, contractual interruptibility capacity.

Optimization consists of carrying out short and long term economic arbitrage between the various resources available to satisfy EDF's supply commitments to its customers, while controlling risks linked to uncertainties related to generation, consumption, market events, and their financial consequences.

DOAAT's objective is to secure and maximize the gross energies margin of the "generation-supply" entity by optimum use of upstream or downstream assets flexibility and by permanently seeking the best purchasing and sales opportunities on the wholesale markets.

The DOAAT deals with the supply in fossil-fired fuel, coal and oil, for the EDF's plants.

For the longer term, DOAAT is planning and proposing structural changes in the upstream and downstream asset portfolios, based on anticipated changes in the market and company strategy.

For transactions on the electricity wholesale markets, the DOAAT relies exclusively on EDF Trading, a wholly-owned EDF subsidiary. Since September 2006, DOAAT has also ensured the balance of the upstream/downstream gas portfolio of EDF in France and Belgium for the following three years, as well as the associated transmission and storage logistics from border delivery points, the Zeebrugge gas hub and Gas Exchange Points ("GEP") in France. It manages the exposure of the upstream/downstream gas portfolio to the risk of price increases and provides support for the organization of offers by EDF's marketers to its customers in France and Belgium.

The DOAAT and EDF Trading currently have approximately 1,200 employees, mainly in France and Great Britain.

### 6.2.1.3.2 UPSTREAM/DOWNSTREAM BALANCE OPTIMIZATION ACTIVITIES

The DOAAT is responsible for the management of physical risks to EDF's upstream/downstream electricity and gas portfolios and their financial consequences.

The DOAAT optimizes the energies Supply and Generation gross margin by using the available flexibility levers of the upstream, downstream and wholesale market portfolios, and proposing developments in value and structure of these portfolios over different time periods:

#### *6.2.1.3.2.1* Optimizing the Electricity Upstream/Downstream Equilibrium

**In the long term (5 years or more),** the DOAAT contributes to the preparation of the generation investment program and, notably, the renewal of the fleet in parallel with the development of long-term downstream market opportunities.

**In the medium term (5 to 3 years),** the DOAAT's role is to continuously and coherently create an optimized view of the Generation-Supply portfolio and EDF's supply/demand balances, by determining the financial trajectories and the landscape of acceptable physical and financial risks. The main levers are as follows: seeking new maintenance or operating policies with a view to improving the availability or flexibility of generation resources and adapting the mix of facilities; segment-based market share strategies, tariff changes, scaling interruptibility and seeking new sales offers; and adapting existing long-term contracts and seeking structured contracts with suitable counterparts.

Management of the electricity supply/demand equilibrium can also be considered **in the short term (3 years to 1 month)** within the framework imposed by the extreme risk (volume risk) and price risks policies drafted in accordance with the directives of the Group Risk Management Division as approved by the Integration and Deregulated Operations France Chief Officer. From a physical point of view, the main risks for energy are variations in temperature, hydraulicity, availability of the generation fleet and market shares. Thus for example, a decrease in temperature of 1°C in winter leads to an increase in consumption of electricity in France up to approximately 2,100 MW (source RTE-EDF Transport) and, in two extreme years, the difference in available volumes of hydropower can reach 15 TWh. The DOAAT also manages the exposure of EDF's upstream/downstream portfolio to energy wholesale markets' prices (electricity, gas, coal and oil products) and the $CO_2$ emission rights' market's prices variations.

In order to be able to face "volume risk," the DOAAT takes each week significant power margins to reduce the likelihood of EDF being obliged to make purchases on the spot market (next-day monitoring) to satisfy its portfolio of market commitments. DOAAT also has a group of leverage actions: the programming of generation way (in particular, nuclear power) maintenance operations, stock management (fossil fuels, hydropower reserves and customer removal capacity), sales and purchases on wholesale markets. The DOAAT manages the price risk through EDF Trading, the only entity authorized to conduct economic arbitrage on wholesale markets, depending on anticipated changes in market prices.

**In the short term – (weekly to intraday)** – the DOAAT is in charge of the "balance responsibility" in EDF's scope towards RTE-EDF Transport in mainland France, i.e., EDF undertakes to compensate RTE-EDF Transport financially in the event of a discrepancy within the scope of its equilibrium management. The optimization consists of informing RTE-EDF Transport the day before of an offer/supply balanced program for the next day which allows the reduction of the supply costs of EDF's contractual commitments. In order to ensure balance in EDF's scope, the DOAAT can benefit from the flexibility of the customer portfolio (namely, its interuptibility) or generation assets (moving shutdowns and trials, assets which can be mobilized within a few hours, such as the fossil fuel fleet, or within a few minutes, as it is the case for combustion turbines and hydropower plants), depending on their economic value and by hedging them with the "spot" sales and purchases of energy carried out by EDF Trading on the markets. Customer portfolio and generation flexibility go as far as allowing arbitrages within the same day.

In addition, the DOAAT analyses and evaluates the impact of regulatory and institutional developments on the physical and financial balance of the generation-supply portfolio: system for allocating capacities at the borders; reinforcement of environmental requirements.

Under the framing of the French Electricity Union (UFE), EDF, as some French producers, has implemented a daily information communication system concerning their facilities' generation and their availability prospects.

In order to promote market transparency, the UFE has decided since late 2008 to expand and accelerate the publication of such data.

#### *6.2.1.3.2.2* Optimizing the Gas Upstream/Downstream Equilibrium

DOAAT optimizes the upstream/downstream equilibrium of EDF in the domain of natural gas over a three year horizon and manages all corresponding gas flows.

Upstream gas comprises medium or long term gas supply contracts (gases and LNG) negotiated by the Gas Division, purchase and sales on the natural gas wholesale markets by EDF Trading, and the associated logistics: capacities for the transit and transmission of natural gas, regasification at methane

terminals and storage of natural gas.

Downstream consists of the customer portfolios of EDF, EDF Belgium and since April 2008, Électricité de Strasbourg.

Optimizing means reducing the costs of procurement and the associated logistic capacities, in compliance with the risk and sales projection policy of the company. Minimizing procurement costs is achieved by arbitrage over all time periods, between recourse to the wholesale market via EDF Trading and mobilizing available portfolio flexibilities: procurement contract deliveries, use of storage capacities, supply interruptions provided for in contracts with various customers. For management of market price fluctuation risks, DOAAT decides on the necessary financial hedging, which is implemented via EDF Trading.

### 6.2.1.3.3 EDF TRADING

Energy commodities trading is a key element in optimizing EDF's generation and supply activities insofar as, in the context of wholesale markets, the constraints and needs of generators and suppliers must be accounted for jointly, and not separately.

EDF Trading is the entity in charge of trading on the wholesale markets for electricity, natural gas, fossil fuels and $CO_2$ emission permits on behalf of EDF. In this respect, EDF Trading is in particular charged with the purchase and sale of transmission capacities of gas and electricity within the European networks and the supply of fuel to EDF's power plants. In 2009, EDF Trading traded approximately 2,315 TWh of electricity, 205 $Gm^3$ of natural gas, 525 millions tonnes of coal and related transmission capacities, 681 million barrels of oil (primarily by-products), and emission certificates for 266 million tonnes of $CO_2$.

The trading activities of EDF Trading are integrated into DOAAT's optimization strategy. Thus, the director of DOAAT is a member of the Board of Directors of EDF Trading.

EDF Trading Ltd. is an English law entity, wholly-owned subsidiary of EDF, which acts on the Markets through its wholly-owned subsidiary EDF Trading Markets Ltd. located in London and regulated by the British Financial Services Authority (the "Financial Services Authority").

#### *6.2.1.3.3.1* Trading in Electricity

EDF Trading is the exclusive interface between EDF and the electricity wholesale markets. It is therefore responsible for optimizing and carrying out daily purchases and sales and executing the futures hedging transactions of DOAAT. Since 2006, in order to facilitate these operations, EDF Trading has had a trading subsidiary in France which is responsible in particular of daily and sub-daily trading activities on the electricity markets, particularly in France and Germany. The entity acts under the control of EDF Trading and integrates all management processes and risk control of EDF Trading.

EDF Trading is now known as one of the most important and high-performing electricity traders in Europe. EDF Trading has also developed a significant presence on the electricity markets in Eastern Europe and in the United-States, in support of the EDF group's development strategy.

The majority of EDF Trading's electricity-related activities is based on bilateral over-the-counter transactions. The proportion of transactions carried out using financial instruments, for which delivery and settlement take place for cash only, has increased gradually and consistently over recent years, due to the wish of newcomers to reduce their exposure to physical and credit risks. Nevertheless, this development remains limited, in as much as market operators create, use and sell underlying products, and frequently require the products to be physically delivered.

#### *6.2.1.3.3.2* Trading in $CO_2$

EDF Trading has a significant role on the European market for $CO_2$ emissions permits. EDF Trading is in addition the exclusive interface for EDF and EDF Energy with the wholesales market for their hedging operations. EDF Trading is also active on the market of clean development mechanisms. This program defined by the Kyoto protocol allows the acquisition of emission credits generated by reduction of green house gas emission projects in emerging countries. In 2006, EDF Trading has also been entrusted with the management of the Carbon Fund Group set up by EDF and associating the main companies of the EDF group (EDF, EDF Energy, EnBW and Edison). By mutualising of the Group's capacities regarding the purchase of emission credits, this fund has a purchase capacity of approximately €300 million and places it as one of the principal actors on the clean development market. With the creation of this fund, the different companies of the EDF group consolidate their hedging strategy by diversifying their resources $CO_2$ in emission allowances.

On November 16, 2009, EDF Trading and Bionersis, leader in the processing of gases from waste decomposition, entered into an agreement for the recovery of gas from waste from 4 sites in South America. This agreement will allow EDF Trading to acquire $CO_2$ emission permits generated by collecting methane from such waste from the four facilities that Bionersis owns and operates.

#### *6.2.1.3.3.3* Trading in Gas

EDF Trading is one of the main traders on the European gas markets and operates mainly in the United Kingdom, Belgium, The Netherlands, Germany and France. EDF Trading is involved at every step in the supply chain, from the purchase of the product directly from offshore platforms through to the supply of the product to its counterparties of the wholesale market. It is also involved with transmission and storage. EDF Trading's gas activities are based on a large number of structured transactions.

EDF Trading has exclusive responsibility for the interface between EDF and the gas wholesale market. It optimizes and implements daily buying and selling transactions and conducts long term hedging operations on behalf of DOAAT.

EDF Trading has since 2006 also been active on the liquefied natural gas market (LNG). In June 2007, EDF Trading signed a contract with Ras Laffan Liquefied Natural Gas Company Limited (II) (RasGas), a Qatar gas company (see section 6.4.2 ("Natural gas businesses")).

On June 5, 2008, EDF Trading signed an agreement with The Dow Chemical Company (Dow) to share liquefied natural gas (LNG) regasification capacity. Under the agreement, EDF Trading will provide Dow with access to European LNG regasification terminals. In return, Dow will provide EDF Trading with access to its regasification capacity at the Freeport LNG terminal in Texas (see also section 6.1.1.3 ("Gas")) on the acquisition of gas fields in the North Sea from ATP Oil & Gas).

Furthermore, on October 20, 2009, EDF Trading and the trading subsidiary of Gazprom entered into an agreement providing for delivery exchanges of natural gas between the United-States and Europe, for 0.5 $Gm^3$ per year over the next five years.

#### *6.2.1.3.3.4* Trading in Coal and in Coal Freight

EDF has entrusted EDF Trading with the exclusive responsibility for supplying its fossil-fired power plants with coal. EDF Trading is also responsible for supplying the EDF Energy's thermal power stations with the international coal purchases. EDF Trading is one of the major operators on the physical

and financial markets for coal and for the corresponding freight. EDF Trading purchases coal from the main generation sites in the world, including South Africa, Australia, Colombia, Indonesia and Poland, and is one of the main coal importers in Europe. EDF Trading has entered into long-term purchase contracts in the Pacific and Atlantic basins and has specialized teams who are highly experienced in maritime and land logistics.

In July 2007, EDF Trading acquired the company Amstuw BV, which manages three coal terminals with a total capacity of 15 million tonnes per annum in the port of Amsterdam.

EDF Trading has also created at the end of 2007 a joint venture in partnership with Chubu Electric Power Company on supplying and trading coal in Japan.

EDF Trading acquired on December 9, 2008 from Whitehaven Coal Limited a 7.5% stake in the entity Narrabri Coal Joint Venture exploiting the Narrabri coal mine in Australia. This investment includes a coal off-take contract of 20 years which allows EDF Trading to secure a portion of its coal long term supply. The Narrabri Coal Project is located 25km south of the township of Narrabri. The coal production is expected to start in the first half of 2010.

#### *6.2.1.3.3.5* Trading in Oil

EDF Trading is active on the financial markets of oil, in particular in order to manage the indexation of gas contracts prices on oil products prices. Trading activities in this area consist mainly of executing hedging transactions on the gas portfolio and developing trading around these positions, based on arbitrage opportunities arising on the markets, always strictly within the risk limits set by the Board of Directors.

#### *6.2.1.3.3.6* Biomass Trading

In July 2007, EDF Trading acquired the company Renewable Fuel Supply Limited (RFSL). RFSL supplies biomass, the associated logistics, and technical support services for electricity generators wishing to use a dual fuel supply (biomass and coal) for their coal-fired power stations.

#### *6.2.1.3.3.7* Development of EDF Trading Activities Overseas

On October 30, 2008, EDF Trading Limited acquired Eagle Energy Partners I, L.P. ("Eagle"), renamed since October 5, 2009 EDF Trading North America, LLC, from Lehman Brothers. EDF Trading North America is an entity based in Houston (Texas) which operates in the optimization and in the electricity and gas trading in the US. Its main activities include:

- providing optimization of electricity production means and matching customer supply and demand;
- providing optimization of gas storage and transportation of assets;
- providing financial hedging linked with energy prices.

EDF Trading North America is a company that has nearly 180 associates and is a well established North American wholesale gas and electricity business. It is EDF Trading's platform for its activities in North America.

On April 17, 2009, EDF Trading North America expanded its activities in the field of electricity trading by acquiring a portfolio of contracts held by Constellation in the west of the country.

#### *6.2.1.3.3.8* Partnership with Crédit Agricole-CIB

On May 13 2009, EDF Trading and Crédit Agricole-CIB signed a partnership agreement creating a joint venture that will supplement Crédit Agricole-CIB's financing and origination activity.

This joint venture will offer business services to Crédit Agricole-CIB's customers, such as for example the financing of energy infrastructures including contingency provisions extended to cover energy commodity risks. For EDF Trading the partnership opens new perspectives for organic development.

EDF Trading provides the joint venture with expertise in operations and risk management in the wholesale energy markets along with its operating infrastructure. Crédit Agricole-CIB contributes its customer base and the financial resources necessary to the trading activities of the joint venture.

This joint-venture, based in Crédit Agricole-CIB's London offices, started trading in November 2009.

### 6.2.1.3.4 CAPACITY AUCTIONS

The DOAAT manages the capacity auctions mechanism ("VPP"). Capacity auctions result from a commitment made by EDF to the European Commission in the context of EDF's acquisition of EnBW shares. Since 2001, EDF has therefore committed to making part of its generation capacities available to the market for an estimated initial period of 5 years which means in principle until February 7, 2006. This commitment was taken at the beginning of 2001 to facilitate access of competitors to the French market.

In 2009, almost 38 TWh (for 43 TWh in 2008) was made available to the market.

Since February 2006, EDF has had the possibility to file a motivated request to remove itself from the auction process. As of today, EDF decided to not make this choice. In September 2006, after discussions based on proposals made by EDF, the European Commission authorized a certain number of changes to the auction process, notably the introduction of a basic product for a four year period, on sale since September 2006, without any changes to the annual volume of energy made available by EDF.

Auctions therefore still continue every quarter. If the termination of auctions is planned, EDF would be in favor of a progressive exit, to avoid too much disturbance in the market.

### 6.2.1.3.5 PURCHASE/SALES CONTRACTS FOR WHOLESALE ELECTRICITY

EDF has trade relationships with European operators, such as GDF SUEZ, Enel, EnBW, NOK, EGL, Atel, Poweo, Direct Énergie and SNET-EON, through numerous energy purchase or sales contracts.

In 2009, the volumes sold and purchased represented 48 TWh and 6 TWh, respectively.

There are several types of contracts, relating to:

- rights to energy generated by generation plants, mostly nuclear, in which the contracting parties have a stake as long as the installation is in operation (see section 6.2.1.1.3.1 ("EDF's nuclear fleet") above);
- drawing rights for electrical power, totally or partially guaranteed for a period lasting generally from 15 to 25 years;
- rights and obligations contracted for with formerly related generators (mainly the SNET, which became independent of EDF when markets opened).

The portfolio of contracts is representative of the structure of EDF's generation facilities, mainly comprised of nuclear plants. EDF sells energy at basic load and purchases it at mid-merit or peak load.

### 6.2.1.3.6 SUPPLYING ELECTRICITY TO ALTERNATIVE SUPPLIERS IN FRANCE

By its decision of December 10, 2007, the Competition Council accepted and made mandatory the commitment proposed by EDF on making available to alternative suppliers a substantial capacity of electricity of 1,500 MW base load, i.e., a volume of approximately 10 TWh/annum over periods going

until fifteen years, at price levels allowing competition with EDF offers on the free mass market.

For an initial five year period from 2008 to 2012, the price in current Euros set at €36.8/MWh for 2008, then €39.4/MWh for 2009, will increase progressively to reach €47.2/MWh in 2012.

These volumes will be allocated during three successive invitations to tender in 2008 and 2009 open to all alternative electricity suppliers in France. The awards were at prices the purchasers were willing to pay to benefit from the electricity offered for the second ten year period. The minimum capacity accessible to each purchaser was 1 MW. The first award was on March 12, 2008. 12 companies have participated to this award which had allowed 5 companies to purchase the 500 MW proposed by EDF. The second award was organized on November 19, 2008 and enabled 5 companies over 10 participants to buy the 500 MW proposed by EDF. Finally, the third award took place on November 18, 2009 and it allowed 4 companies to buy the 500 MW proposed by EDF. This third invitation to tender for alternative suppliers was the last one organized by EDF. Ultimately, these 3 auctions have allowed 9 alternative suppliers to acquire 1,500 MW, which is the total amount of energy proposed by EDF.

In 2009, the total volume of electricity provided by EDF through this mechanism accounted for 6 TWh.

## 6.2.2 Regulated activities in France

In France, EDF's regulated operations consist of the following:
- transmission, handled by RTE-EDF Transport (hereinafter called "RTE");
- distribution, handled by ERDF and the joint operator with GDF SUEZ;
- EDF activities in Island Energy Systems (Corsica, French Overseas departments and Saint-Pierre-et-Miquelon), which are managed by the Island Energy Systems Division (*Systèmes Energétiques Insulaires*, or "SEI").

The tariffs for these regulated operations are established on the basis of the tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE") and on the basis of compensating the additional generation costs in zones that are not interconnected with the network in metropolitan France (*Compensation des Surcoûts de Production dans les Zones Non Interconnectées au réseau métropolitain continental*, or "CSPE ZNI") (see section 6.2.2.4 ("Tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")")).

### 6.2.2.1 TRANSMISSION – RTE

Created on July 1, 2000 and having become a subsidiary on September 1, 2005, RTE is the operator of the French power transmission network, which it owns, operates, maintains and develops. With some 100,000 km of high and very high voltage circuits and 45 cross-border power lines, this network is the largest in Europe. Its geographical position places RTE at the heart of the European electricity market. RTE is the entity responsible for the correct operation and safety of the electricity network. It guarantees equitable access of all users of the network. RTE was converted into a subsidiary in 2005, and RTE has since been a wholly-owned subsidiary of EDF fully consolidated in the financial statements of the Group.

RTE attaches special attention to support in the best possible conditions the development of renewable energy in France. The development of transmission and interconnections network is an essential element for the development of renewables energies, including wind energy, and their integration into the electrical system.

In 2009, RTE group recorded sales of €4,130 million, EBITDA of €1,212 million (source: 2009 Consolidated financial statements of RTE).

The table below sets forth a simplified evaluation of energy flow on the RTE network over 2006 to 2008:

| *(TWh)* | 2006 | 2007 | 2008 | 2009* |
|---|---|---|---|---|
| **Injections** | | | | |
| Generation | 520.6 | 514.8 | 549.1 | 518.8 |
| **Withdrawals** | | | | |
| Energy withdrawn for pumping | 7.4 | 7.6 | 6.6 | 6.7 |
| Deliveries (including losses) | 449.6 | 450.2 | 494.5 | 486.4 |
| **EXPORT BALANCE OF PHYSICAL EXCHANGES** | **63.6** | **57.0** | **48.0** | **25.7** |

**Provisional figures.*

Throughout 2009, except in March, the balance of physical electricity exchanges with countries abroad was lower than in 2008, due to the decrease of generation in France but it remained on the side of exports. Furthermore, for the first time since the 1982-1983 winter, the monthly balance of exchanges was on the side of imports in October.

#### 6.2.2.1.1 RTE ACTIVITIES

RTE:
- manages power flows: RTE is responsible for the supply/demand balance and makes adjustments, manages electricity flows and manages access rights to international interconnections, in collaboration with neighboring network operators. It mobilizes reserves and compensates for losses. It makes the necessary accounting adjustments and resolves imbalances;
- manages the transmission infrastructure: RTE operates and maintains the public transmission network and is responsible for its development, for minimizing costs for the community and for ensuring the safety of the system, people and property; and
- guarantees access to the transmission network: it enters into contracts with transmission network users on the basis of network access tariffs and in accordance with rules of non-discrimination.

##### *6.2.2.1.1.1* Power Flow Management

***Cost allocation***

The costs corresponding to the balancing offers activated by RTE as a result of negative imbalances are passed on to the balance responsible entities (generators, traders, suppliers, etc.) proportionately, based on their imbalance. In the event of positive imbalances RTE financially compensates the balance responsible entities for positive imbalances.

***Interconnections***

RTE manages access to international interconnections in collaboration with the transmission system operators of neighboring European countries.

The European electricity transmission networks are interconnected, and ensure that energy can be transmitted from one country to another. These interconnections are used to ensure the operating safety of the electricity transmission networks (in particular using neighboring generators and transmitters to compensate for a major generating or transmission unit outage in France and conversely) and to develop the European electricity market by enabling an electricity supplier to sell its energy to a customer in another country in the European Union. Moreover, these interconnections, by working on the basis of time differences between peak-loads on different

sides of borders, enable generation capabilities to be better shared at a European level.

*France-Spain Interconnection:*

Inelfe (*Interconnection Électrique France Espagne*) is a Franco-Spanish company created on October 1, 2008 to carry out the whole of the interconnection project between France and Spain, from the initial feasibility studies through to completion of the actual construction work. The company will guarantee that the technical and environmental solutions selected by France and Spain for this project are consistent. Inelfe is a simplified joint-stock company with shares held equally by RTE and its Spanish counterpart REE (Red Eléctrica de Espana) and it will benefit from the structures and expertise of both its parent companies as regards the design and construction of the link. On October 27, 2009, the Ministry for Ecology, Energy, Sustainable Development and the Sea confirmed the route (area of least impact) proposed by the *Préfet* of the Pyrénés-Orientales department. The interconnection is due to enter service at the end of 2013 at an estimated cost of €700 million.

*Interconnection with the United-Kingdom:*

RTE and ELIA, manager of the Belgian transmission network, and National Grid in Great Britain, launched on September 8, 2008 among different actors a consultation of the electricity market on the need to increase in the future exchange capacities between Great Britain and the rest of Europe, as well as on the proposed construction of an additional interconnection between France and Great Britain. This consultation takes place in a context where increased investment in transmission networks across Europe is becoming a necessity, particularly in order to support the growth of renewables and the development of new generation plants.

Then, on December 18, 2008, RTE and ELIA created a joint company, Coreso. This company, which has been operational since February 16, 2009, aims at coordinating the operation of the electric power systems comprising France and Belgium. The creation of Coreso meets the needs of strengthening operational cooperation between transmission system operators (TSOs) as expressed both by the European Commission and by the actors of the electricity market. Coreso should enable a better integration at the regional level of the production of renewable energy and guarantee a secure management of border flows which are rising sharply.

National Grid joined RTE and Elia as a new shareholder of Coreso in May 2009. The three TSOs now hold each one third of the share capital of Coreso.

RTE and National Grid decided in July 2008 to jointly engage around €70 million of investments in the electricity interconnection IFA2000 linking France to England, particularly for the replacement of the conversion equipments dating from 1986, year of commissioning the interconnection. RTE and National Grid are thus going to increase the reliability of the existing electricity interconnection and improve over time availability in response to the development of European electricity market. Thus they mark their willingness to enhance the safety of electrical systems and of the smooth flow of electricity exchange between the United Kingdom and the rest of Europe.

***Tri Lateral Market Coupling***

Due to the existing limitations in cross-boarder exchange capacities, the EC regulation n° 714/2009 sets forth new rules at European level to handle problems related to the network congestion for the allocation of interconnection capacities (see section 6.5 ("Legislative and regulatory environment")). For practical purposes, there are two methods which allow to comply with this regulation:

- allocation of an interconnection capacity by open auctions: the sale of exchange programming rights;
- allocation by implicit auctions: interconnections access priority is given to the less expensive energy blocks.

In this last case, "market coupling" will be carried out. Market coupling is based on the performance of energy markets and boils down to merging purchase and sale book buildings of two nearby markets and creating a common price for such markets, within the import and export exchange capacities' limit.

The coupling of the three electric markets France-Belgium-The Netherlands, called "Tri Lateral Market Coupling" started on November 21, 2006. It was the first experience of this kind in Europe (except for Nordpool) and its success is now confirmed. After signing the "Memorandum of Understanding" in June 2007, electricity markets and managers of transmission networks in Belgium, in France, in Germany, in Luxembourg and in the Netherlands have made significant progress towards a coupling of the electricity markets in the CWE (Central and Western Europe) region and towards a better coordination for security of supply. The result of the market coupling allows the establishment of the most important regional electricity market in Europe. It contributes to a reconciliation of these electric spot markets and to a more efficient use of interconnections. The market coupling enhances competition on the prices of wholesale markets of electricity and increase the safety of power. On October 1, 2008, the 7 TSOs concerned (RTE, Elia, TenneT, Cegedel Net, and EnBW TNG, E.On Netz and RWE TSO) created a joint venture company named "CASC-CWE" (Capacity Allocation Service Company) aiming to offer a "single window" for the allocation by auction of the transmission capacities of energy transmission to the borders of the CWE zone countries (France, Benelux and Germany).

### *6.2.2.1.1.2* Management of the transmission infrastructure

***Maintenance***

RTE is responsible for maintaining the transmission network, through everyday maintenance, emergency repairs and the renewal of installations that are at the end of their service lives or that are damaged.

Following the storms of 1999, RTE implemented a "mechanical safety program". Undertaken with numerous external subcontractors, the program's objective is to provide against major climatic events by the strengthening of the mechanical resistance of overhead lines to enable them to withstand wind speeds of up to 150 km/hr and the transformation or installation of approximately 16,400 "anti-cascade" towers in order to prevent a domino effect when faced with higher wind speeds.

By the time the program is completed in 2017, RTE is set to have spent a total of €2.4 billion on making its network mechanically secure. That represents an average rate of expenditure of around €160 million per year. The program involves 45,000 km of overhead lines on the RTE network.

At the end of 2009, RTE had installed three quarters of the "anti-cascade" pylons planned and all of them will be in place by 2013. These special pylons present significantly improved mechanical resistance and are installed every 3 to 5 kilometers on very high voltage lines (225,000 and 400,000 volts). At the end of 2009, RTE had completed 95% of the work required to widen forest corridors, a task that concerns a total of 8,000 km of power lines. In 1999, tree falls were responsible for causing 50% of all damage to pylons.

During the night of Friday January 23 to Saturday January 24, 2009, the exceptionally heavy Hurricane Klaus, which in places was stronger than the 1999 storm, damaged a large part of RTE's high and very high voltage network in the southwest of France, Languedoc-Roussillon and the south of Auvergne, causing breaks in the electricity supply. By putting its entire network back into service within five days, RTE fulfilled its commitment made

to the French State in 2002. This result was achieved due to securing work already carried out and the extraordinary mobilization of 600 of RTE's technicians and specialists supported by helicopter-borne resources. The storms of December 1999 and the storm of January 24, 2009 are historic events comparable in terms of wind power. However, within an identical area in the southwest, Hurricane Klaus powered off half the number of high and very high voltage lines and a third of the number of posts that the 1999 storms did. It damaged four times fewer pylons than in 1999. These results show the validity of the action taken in the context of RTE's machanic securing plan (source: RTE Electricity Report 2009).

By 2017, this security work will ensure that each RTE customer delivery point will be connected to the network by at least one line capable of withstanding wind speeds equivalent to those of 1999, in compliance with the new more rigorous mechanical resistance standards.

### *Development*

In addition RTE is continuing to develop the network. New projects aim to reinforce the national grid and anchor the French transmission network within the European system.

Each year RTE produces a multi-annual investment program that is submitted to the Energy Regulation Commission (*Commission de Régulation de l'Énergie*, or CRE). In 2009, RTE spent €1,021 million on the development of its network as against €834 million in 2008.

### *New investment in the transmission network*

#### *Yvelines power supply secured*

The electrical power supply in the Yvelines is now secured thanks to the creation of a new transformer at Méré and a 225,000 volt underground link between this new transformer and the Elancourt substation which supplies electricity to a large part of the department.

These new infrastructures inaugurated on March 6, 2009 completely resolve the transit capacity constraints that the electricity transmission network has experienced regularly these last years, especially during the colder winter periods.

#### *The Marlenheim-Vigy line and the connection to Saint-Avold*

The new 400,000 volt line connecting Marlenheim (near Strasbourg) to Vigy (near Metz) entered service on April 30, 2009 is the fruit of a consultative process initiated back in 1998. For RTE, it represents the achievement of one of the decade's most important projects. The 400 kV Marlenheim-Vigy line, 137 km long (112 in Lorraine and 25 in Alsace) was constructed to replace the old 225 kV link. This new double-circuit line contributes to:

- securing the power supply of the Strasbourg urban area;
- supporting the economic development of the East Moselle area (Saint-Avold and Sarrebourg sectors);
- ensuring the power supply of the second phase of the TGV East;
- reinforcing the electricity transmission capacities of France's greater eastern area.

#### *Strengthening the power supply of the South Brittany region with the start of construction work on the 400/225 kV Morbihan substation*

This work began in fall 2009. Brittany is a region which is experiencing significant growth in electricity consumption along with a deficit of production. Most of the power produced actually originates from the Cordemais plant or from the nuclear plants in the Loire valley: an incident on the transmission network during peak winter consumption can lead to the saturation of the 225 kV network between Nantes and Lorient and cause an outage. The new project results from a wide-ranging consultative process organized in June 2005 under the auspices of the Lorient sub-Prefecture. The location of the substation was chosen unanimously at the end of the consultation phase in 2006. Installed in a former quarry, it presents the advantage of having little impact on agricultural land and of being situated away from residential areas. The proximity of the substation and of the 400 kV Cordemais (Nantes) – La Matyre (Brest) line should allow connection work to be limited to the installation of pylons, without creating a new line. This substation is due to come on stream in December 2010.

### *Another step in increasing investment in RTE networks*

Integration of the European market, fundamental restructuring of the power generation fleet, societal changes enforcing restrictions on the integration of new public interest infrastructures and the maintenance of industrial resources to meet the needs of customers and local authorities. These are the challenges that RTE must confront in its mission as manager of the electricity transmission network. To meet these demands, RTE with the assent of the French Energy Regulation Commission (*Commission de Régulation de l'Énergie*, or "CRE") is entering a new phase in terms of investment: investment has enjoyed substantial growth since 2004, and will increase to more than €1 billion per annum over the period 2009-2012. RTE will finance this investment from its own resources, generated principally from the tariffs paid by the users of the network. These tariffs are calculated to cover all of RTE's costs and provide a fair return on the capital committed to approved investment programs (see section 6.2.2.4 ("Tariffs for use of the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")") below).

### *2009 Energy Balance*[1]

French domestic electricity consumption in 2009 was 486.4 TWh, a fall of 1.6% (-8.1 TWh) compared with 2008. Extractions by direct customers connected to the RTE network fell by 8.6% (-7.3 TWh). The unfavorable economic context, associated with the effects of the crisis that started in October 2008, clearly contributed to a reduction in domestic consumption. Consumption by customers supplied by the distribution networks however remained virtually stable. The fall is thus essentially attributable to RTE's direct customers (large industrial customers), with the reduced consumption by small and medium businesses supplied by the distribution networks being almost entirely offset by a rise in consumption by professionals and individual customers. The climatic conditions encountered in 2009 (in particular the cold spells in January and December) resulted in a rise in consumption of 2.0 TWh over 2008. Domestic consumption, corrected for the impact of climate hazards and the effect of the leap year, reached 478.1 TWh in 2009, a reduction of 1.8% relative to 2008 (-8,5 TWh). Although consumption in November and December exceeded the levels recorded at the end of 2008, consumption in the last quarter of 2009 remained down by 0.4% compared with that of the last quarter of 2008. In 2009, a new high in consumption in France was recorded on Wednesday January 7 at 19h00 with a value of 92,400 MW for an average daily temperature of – 3.0°C (-7.8°C below normal).

The export balance for physical exchanges with foreign countries totaled 25.7 TWh in 2009, a reduction of 46.5% (-22.3 TWh) over 2008.

### *6.2.2.1.1.3* RTE international activities

RTE International, a subsidiary of RTE created in September 2006, is RTE's interface for all engineering and consultancy services outside of France, either in response to calls for tender or by privately negotiated contracts.

1 Source: *l'énergie électrique en France en 2009* (RTE) – Electrical power in France in 2009.

RTE International's activity suffered in 2009 from the worldwide economic situation and activity was buoyed in great part by existing contracts. Two important new contracts were signed, in Vietnam for the study of the installation of a tele-control network in partnership with ERDF International and EDF-CIST, and in Senegal in partnership with CapGemini, for the preparation of the hiving off of the generation, transmission and distribution activities of the historical operator, SENELEC.

#### 6.2.2.1.2 ORGANIZATION OF RTE

**RTE-EDF TRANSPORT SA: A FRENCH SOCIÉTÉ ANONYME WITH AN EXECUTIVE BOARD AND A SUPERVISORY BOARD**

Pursuant to law n° 2004-803 of August 9, 2004 and decree n° 2005-1069 of August 30, 2005 which approved the RTE's articles of by-laws, the company is managed by an executive board under the control of a Supervisory Board.

RTE's Supervisory Board, chaired by André Merlin, comprises twelve members, including six members appointed by the Ordinary Shareholders' Meeting, four members representing employees and two members representing the French State. They are appointed for five years.

RTE's Executive Board, chaired by Dominique Maillard, comprises four members, appointed for 5 years, who carry out their responsibilities under the control of the Supervisory Board. Subject to the approval of the Minister in charge of Energy, the Supervisory Board appoints the Chairman of the executive board as well as, based on the Chairman's recommendations, the other members of the executive board.

Pursuant to Article 14 of the French law of February 10, 2000, the Chairman of the executive Board submits to the CRE, on an annual basis, the investment program for the public electricity transmission network, in accordance with RTE's medium-term financial plan.

In France, management of the Public Transmission Network (PTN) is performed by RTE pursuant to Article 7 of the law of 2004-803 dated August 9, 2004. Article 12-II of law 2000-108 dated February 10, 2000 provides that the PTN manager should perform its mission under the conditions set out in model concession specifications approved by decree of the French Council of State following an opinion by the Energy Regulation Commission. The PTN concession model specifications were approved by decree n°2006-1731 dated December 23, 2006. The amendement of the concession agreement dated November 27, 1958, given concession to RTE of the PTN, was signed on October 30, 2008; it will expire on December 31, 2051. The new specifications replace those dating from 1995, which are inappropriate for the new legal framework created by European directives (legal separation of accounting and management for the transmission and generation activities and the supply of electricity).

#### 6.2.2.1.3 TARIFF FOR USING THE PUBLIC TRANSMISSION NETWORK

The tariff for using the public transmission network is a component of TURPE (see section 6.2.2.4 ("Tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")")).

### 6.2.2.2 DISTRIBUTION – ERDF (ÉLECTRICITÉ RÉSEAU DISTRIBUTION FRANCE)

The main purpose of distribution activities is to deliver the electricity sold by electricity suppliers to end-users. EDF contributed all its distribution operations into a wholly-owned subsidiary, ERDF, operational since January 1, 2008. ERDF serves approximately 34,000 out of some 36,500 French municipalities. This represented in 2008 95% of the volume of electricity distributed in France, 5% being distributed by local distribution companies. ERDF delivers electricity to the installation terminals (meters) of network customers, where the withdrawals are made. A number of different operators inject electricity into the distribution network. The main operators are as follows:

- RTE, which is responsible for energy transmission in France (see section 6.2.2.1 ("Transmission – RTE")): the corresponding injections are made from the source substations spread over the network; and
- generators with installations whose size allows electricity to be injected directly into the distribution network.

These injections must compensate, at all times, for customer withdrawals and network losses. Failure to do so may result in a deterioration in the quality of the supplied product (quality of the wave, voltage and even the continuity of supply).

The electricity volumes (preliminary information) transmitted on ERDF's network in 2009 are as follows:

- injections: 367.1 TWh;
  - by RTE: 346.7 TWh;
  - by decentralized generators: 20.4 TWh;
- withdrawals: 345.4 TWh; and
- losses: 21.7 TWh.

The distribution network generates losses, which are in part due to physics (the Joule effect) and depend directly on the quantity of electricity transmitted. ERDF must compensate for these losses in order to supply the quantity of electricity required by the end-users. In 2009, the loss rate was 5.9% of the electricity injected into the network, *i.e.*, 21.7 TWh. Technical losses (Joule effect, iron, ...) account for 60% of total losses. The cost to ERDF was €1,694 million in 2009. To compensate for these losses, ERDF purchases the corresponding electricity on the market by means of invitation to tender, placing approximately 20 qualified suppliers in competition.

ERDF operates through the following businesses:

- as licensee, managing the licensed assets: extension, strengthening and renewal of the network;
- operating and maintaining the network in order to ensure the continuity of service;
- carrying out the work on the network;
- ensuring access to the network to all users within the context of the applicable contractual mechanisms;
- managing the meter system, acquiring, processing and transmitting the consumption data of network users.

In 2009 ERDF distributed electricity to more than 33 million Points Of Delivery (POD) in mainland France via a network of approximately 1,285,000 km.

In 2009, ERDF published sales of €11,374 million, an EBITDA of €2,157 million and a net profit of €217 million. ERDF employed 36,349 people (including non statutory staff) as of December 31, 2009 (source: ERDF activity report 2009).

The Government approached ERDF to participate in the development of a public facility of charging stations for electric vehicles. ERDF announced its conditions for such participation, in particular financial neutrality and the separation of this new activity from the principal activity.

**Institutional and legislative news**

The implementing of the provisions of the law on Solidarity and Urban Renewal (SRU) and the law on Town Planning and Habitat (UH) relating to trunking operations to public electricity distribution network provide for the implementation of a new device whose main characteristics are:

- definition of the trunking operations with a distinction between the extension and the connection part;
- precise identification of beneficiaries and contributors;
- establishment of a single price list for invoicing all of trunking operations;
- taking on by the delivery tariff of 40% of the trunk (reduction applicable as set by the price list).

The decree of July 17, 2008 (published in *Journal Officiel* of November 20, 2008) setting the reduction rate to 40% has enabled the implementation of laws SRU-UH. This decree came into force on January 1, 2009 and relates only to planning permissions with a filing date which is later than that date.

The price list has been proposed to the Energy Regulatory Commission (CRE) which approved it.

Contributions received pursuant to these texts are accounted for in sales.

### 6.2.2.2.1 DISTRIBUTION NETWORK

**Technical characteristics**

As of December 31, 2009, the distribution network for which EDF is the licensee (see section 6.2.2.2.3 ("Concessions") below) comprises approximately:

- 604,100 km of 20,000 volt high voltage lines (HTA);
- 680,900 km of 400 volt low voltage lines (BT);
- 2,205 HTB/HTA source posts; and
- 738,000 low voltage/high voltage transformers.

Generally speaking, this network's limits are:

- upstream: the source substation owned by ERDF for the part that it operates, which forms the interface between the transmission network and the distribution network;
- in certain cases, and still upstream, the substation connecting to generation installations that are directly connected to the distribution network; and
- downstream: the meters and circuit breakers installed at the premises of the customer, which fall within the scope of the concession.

**Targeted recovery of the quality of services**

The quality of services is a major objective of ERDF. This goal is reached by maintaining a steady tension, the closer to a value set by contract or, failing that, by regulation, and by minimizing the number of power cuts. The decree n° 2007-1826 of December 24, 2007, some measures of which came into force on June 28, 2008, sets the thresholds of the quality of services to abide by the managers of the distribution network. Regarding the quality of the voltage, over 98% of customers are considered in 2009 as "well supplied" under existing regulations.

2009 was marked by exceptional climatic events. The "Klaus" storm of January affected more than 1.7 million of clients mainly in the South-West and Midi-Pyrénées area. The "Quentin" storm in February 2009 cut off power to more than 900,000 clients in a large half of the metropolitan territory. These two events have had a strong impact on the average duration of interruption of supply (B criterion). Excluding exceptional events and incidents at transmission level, the B criterion was 86 minutes in 2009.

Following these two storms, the cost of rehabilitation of facilities is estimated at €160 million.

On February 28, 2010, a violent storm, Xynthia, crossed France. In total, 1,300,000 customers experienced power cuts. Over 90% of these were reconnected within 2 days. The costs of this storm are currently being assessed.

**Evolution in investments**

In 2009, €2.3 billion were invested, €1 billion of which were mainly allocated to the connections of new customers and producers. The further launch of investments initiated in 2008 represents an increase of €279 million in investments in the distribution network between 2008 and 2009. The additional resources engaged thereby are applied to ensuring networks' security, to safety in general, to environmental protections and to quality of transmission, fields in which customers and local authorities' expectations are particularly high. In addition, the conceding authorities invested approximately €902 million in 2009, bringing the total investment in distribution networks in mainland France in 2009 to approximately €3.2 billion. A "climate contingencies" action plan was developed and implemented in 2006 in accordance with the public service agreement (see section 6.4.3.4 ("Public service in France")). This plan is based on a complete evaluation of the network's potential weaknesses in respect to climatic events, and provides, in particular, for the burying of over 30,000 km of medium-voltage lines by 2016.

In order to comply with the public service agreement's objectives as well as with environmental and aesthetic objectives, ERDF has also undertaken to bury 90% of the new high-voltage lines and to apply "discreet techniques" to two-thirds of the new low-voltage lines. ERDF does not plan to bury its entire network, as a buried network is subject to the same supply interruption risks as an overhead network: indeed, it may be subject to external shocks (heat waves, floods, works, etc.), and the time required to locate the incident and to re-establish the customer's supply may be longer than in the case of overhead networks.

In 2009, ERDF built over 90% of new medium-voltage lines using the underground technique and over 70% of new low-voltage lines using the underground or discrete technique (twisted cable). It thus exceeded its commitment with the State to reduce the visual impact of its work. Furthermore, as part of its climatic hazards plan, in 2009 ERDF built over 3,700 km of overhead medium-voltage lines.

In order to be able to face major incidents, ERDF created a special rapid-response task-force (*Force d'Intervention Rapide* or FIRE) which allows it to focus teams from all regions in the affected area, in order to end the service interruption as quickly as possible.

The storm Xynthia mobilized approximately 5,000 people including 460 in the context of multi-regional FIRE, 60 from foreign subsidiaries of the EDF group (EnBW and EDF Energy) and 790 from partner firms.

### 6.2.2.2.2 ELECTRICITY MARKET

**Functioning of the electricity market**

The French market for electricity supply has been opened to all customers since July 1, 2007.

In 2009, ERDF continued the continuous improvement of the rules of opening and associated information systems, in consultation with suppliers, regulator (CRE), consumer associations, State and local authorities. Performance indicators for ERDF, defined after consultation with the electricity suppliers, progressed in 2009. In June 2009, ERDF updated its catalog of services to providers, final clients and electricity generators.

The year 2009 confirmed the significant increase in the facilities trunking numbers for electricity production of connection powers of less than 36 kVA already recorded in 2008. Over 31,000 photovoltaic generation facilities of a power of less than 36 kVA were connected to the supply network in 2009 compared to approximately 7,100 in 2008. There are also a small number of low-power wind-driven and hydraulic facilities.

**Connected meters project**

ERDF tests on the 2010-2011 period a new generation of connected meters. These meters let distributors act at a distance and bill customers based on a real index. This experiment opens new opportunities, such as lower costs through electronic meter-reading and maintenance, and better service to customers and suppliers through more options for consumers and more efficient network management (e.g., careful control of supply quality, improved load curve, and fewer non-technical losses). This experiment will involve 300,000 customers in Greater Lyon and in the region of Tours. It will be subject a general review from the CRE in 2011. This will allow to foresee the eventual renewal of all ERDF's 35 million meters.

### 6.2.2.2.3 CONCESSIONS

In France, the concession-issuing authorities own distribution networks which can be qualified as "return goods" *("biens de retour")*. The mission to develop and operate the public distribution networks, whose purpose is to ensure an efficient service for the national territory via the public distribution networks and connection and access, in non-discriminatory conditions, to the public distribution networks, is given by articles 2 and 18 of the law of February 10, 2000 to ERDF and EDF in those zones that are not connected to the continental metropolitain territory, and in their exclusive service zone, to the LDCs (or ELDs *("Entreprises Locales de Distribution"))* mentioned in article 23 of law n° 46-628 of April 8, 1946.

This public service is managed in the context of concession agreements.

In accordance with the provisions of article 14 of law n° 2004-803 of August 9, 2004, modified by article 23 of law n° 2006-1537 of December 7, 2006, the current concession contracts are deemed jointly signed by the concession-issuing authority (local goverment or public institution of cooperation *("établissement public de coopération")*), EDF (or the territorialy competent LDC) for the part concerning supply at regulated tariffs, and by ERDF (or the territorialy competent LDC) for the part concerning network. At the time of their renewal or modification, concession contracts are co-signed according to these terms.

ERDF and EDF manage approximately 1,033 concession contracts, covering approximately 95% of the population.

**Terms of the concession contracts**

A framework concession contract and specifications was adopted (with adjustments, depending on whether the contract was entered into with an urban municipality or a syndicate of municipalities) in June 1992 following negotiations between EDF and the National Federation of Licensors and Local Utilities (*Fédération Nationale des Collectivités Concédantes et Régies*, or FNCCR) and were validated by public authorities. This concession was updated in July 2007 to account for new French legislation (see section 6.5.3. ("Public electricity distribution concessions")). It encourages licensors to regroup themselves at the departmental level. To date, approximately 95% of the concession contracts have been signed according to this framework.

As the contract signed with the city of Paris was due to expire on December 31, 2009, an amendment was concluded on December 22, 2009, extending for fifteen years the current contract with EDF as electricity supply agent. It provides notably for the implementation of a guiding investment outline, divided into 4-year periods, corresponding to tariff periods, within which ERDF will commit to a program of investments once it is compatible with the level of investments taken into account in the TURPE. Correlatively, this amendment, from January 1, 2010, provides for the discontinuation of allocations for depreciation of the conceding authority financing and the provision for renewal.

The contract are generally negotiated locally on the basis of the standard framework specifications adopted in 1992, updated in July 2007, the principal terms of which concern the following points:

- the purpose and scope of the concession: the licensing authority guarantees to the licensor the exclusive right to exploit the public service of development and operation of the public network for the distribution of electricity in a given territory and supply at regulated tariffs. The licensor is responsible for the operation of the service, and operates it at its own risk;
- the principles of pricing, namely equal treatment of users, economic efficiency and geographical adequacy;
- the payment by the licensor of charges to the grantor;
- the obligation for the licensor to carry out industrial and renewal provisions by taking into account the cost of works replacement which have to be renewed (Article 10). The amounts corresponding to these obligations are subject to an annual report to licensors (Article 32);
- the practical terms in case of renewal of the concession: "the amount exceeding provisions made by the licensee for the further renewal of the works conceded in relation to amounts required for these operations will be submitted to the conceding authority, which has the obligation to allocate it to works on the conceded network" (Article 31 A);
- the practical and financial modalities in case of non-renewal or early termination when continued service is no longer of interest (Article 31-B), namely (i) delivery to the grantor of the works and equipment at the concession in normal service state, (ii) the payment by the licensing authority of an allowance equal to the unamortized value of the works revaluated in the proportion of the EDF funding (these provisions are intended to allow recovery by EDF of the unamortized value of the works financed as licensor), and (iii) the payment by the concessionaire to the grantor of the balance of provisions made for the renewal of works completed with industrial depreciation made in the proportion of the participation of the licensor in the financing structures.

**Duration of the concession contracts**

Concession contracts are generally entered into for a period of between 20 and 30 years. The average termination of concession contracts is 2023.

**Execution of work on the distribution networks: a shared skill**

Contracting work on the networks (the lead contractor coordinates, carries out, and finances the work) is divided, on the basis of the principles established in the standard specifications, as follows:

- with respect to connection (network extensions and creation of connections) and installation modifications (network improvements as a result of an increase in electricity demand or to improve service quality), ERDF and the licensor share the contracting of work for rural electrification networks on a case-by-case basis. For urban networks, ERDF is generally responsible for contracting the work;
- ERDF is the lead contractor for maintenance and renewal work (maintenance, pruning, renewal, displacement and compliance); and
- the local authorities are the exclusive lead contractors for integrating installations into the environment (burying work, improvement of aesthetics, etc.).

**Main fees and contributions**

Contracts provide for the payment of a fee that enables the licensor to fund concession-related expenditures.

ERDF pays a fee for electricity installations that occupy public property. This fee is calculated according to a formula based, in particular, on the number of people served, and was revised by an order passed in March 2002. It is paid to the licensing municipalities or licensors unions and to the department.

ERDF and non-nationalized distributors pay into a French fund for electricity depreciation and amortization expenses (*Fonds d'Amortissement des Charges d'Electrification*, or FACE) based on the number of kWh supplied. The FACE redistributes the collected funds to the local authorities to fund their rural electrification expenditures.

ERDF and non-nationalized distributors also pay into a French electricity rate balancing fund (*Fonds de Péréquation de l'Électricité*, or FPE), which splits the equalization charges among the distribution network operators. Equalization charges relate to the obligation to ensure that all customers across the domestic market benefit from the same electricity delivery tariff.

### 6.2.2.2.4 ERDF ORGANIZATION

Since January 1, 2008, the EDF group distribution activities on the French territory are, in accordance with the legal framework, mainly provided by ERDF which is responsible for managing the public electricity distribution network.

Article 26 of directive 2009/72/EC of July 13, 2009 states that if the manager of a distribution network belongs to a vertically integrated company, its distribution operations must be legally independent from its other operations in terms of organization and decision-making. EDF and GDF SUEZ (formerly Gaz de France) decided to create separate subsidiaries for their respective network operators (electricity and gas), both subsidiaries ERDF and GrDF sharing a joint service as permitted by law.

In order to implement the law passed on August 9, 2004, an agreement to transfer assets has allowed EDF to transfer to ERDF assets and liabilities of EDF related to electricity distribution activity (such as rights, authorizations, obligations, and contracts related to managing its public electricity distribution network).

ERDF is a *société anonyme* governed by a Management Board and Supervisory Board. The Supervisory Board, chaired by André Merlin since February 8, 2010, has 15 members: eight appointed by an Annual General Meeting; five employee representatives (elected according to French law n° 83-675 passed on July 26, 1983); and two representatives of the French Government. The Supervisory Board member term of office is five years.

The ERDF Management Board, chaired by Michèle Bellon since March 16, 2010, has five members all natural persons appointed for a five year term, and is monitored by the Supervisory Board.

**ERDF mission**

ERDF operates the public electricity distribution network in mainland France according to conditions specified in concession contracts, and provides other public services assigned by French lre specifically, ERDF:

- outlines and implements operating, investment, and expansion policies for its electricity distribution network;
- ensures that users and other electricity grids can access its network in a non-discriminatory, objective, and transparent manner, and also provides interconnections with other networks;
- gives users the information needed to access its network efficiently (except for information protected by regulations or law);
- handles relations with energy regulatory bodies (e.g., the French Ministry in charge of the Energy, the French Energy Regulatory Commission, and Government agencies granting public distribution licenses) in connection with its activities;
- handles relations with local Governments;
- negotiates, signs, and executes concession contracts;
- operates, repairs and maintains its electricity distribution network;
- oversees the design and construction of network equipment, and provides project management for these networks;
- provides metering services to network users, including the supply, installation, maintenance, weather checking, and replacement of meters, and the management of data collected from the meters, as well as all responsibilities related to these activities;
- provides non-nationalized distributors, other distributors, and Government organizations the services that are specified in Article L. 2224-31, paragraphs III and IV, of the French General Code for Local Governments; and
- and, more generally, carries out all operational, commercial, financial, or property-related activities necessary to achieve the above.

In 2009, ERDF and GrDF took over 92 million meter readings and performed approximately 10 million customer visits carried out in particular by 9,700 ERDF technicians.

**Contractual relations for the joint ERDF and GrDF service**

According to Article 27 of the French law passed on December 7, 2006, these activities are based in particular on a service shared by ERDF and Gaz réseau Distribution France (GrDF), a company created on January 1, 2008, and 100% owned by GDF SUEZ (formerly Gaz de France), which is responsible for the management of public distribution of gas. Each company nevertheless manages the portfolio of clients independently.

The activities carried out jointly by ERDF-GrDF do not operate through a structure with the status of a legal entity. They include construction and maintenance of electricity and gas networks, project management, network operation and management, and metering activities.

On April 18, 2005, EDF and GDF SUEZ (formerly Gaz de France) entered into a joint service agreement specifying their respective roles. This agreement outlines the scope of operations of the joint service and how costs will be shared. This agreement, after having undergone necessary adjustments, was transferred in 2007 to ERDF and GrDF, under the subsidiary activities of electricity distribution of EDF and GDF SUEZ (formerly Gaz de France).

The agreement was entered into for an unlimited duration and may be terminated at any time upon 18 month's notice, during which the parties must undertake to renegotiate a new agreement. If a new agreement is not entered into at the end of this period, the parties will refer the issue to the

mutual dispute resolution procedures, before any referral to courts.

The contract also includes provisions requiring the parties to negotiate in good faith, namely in case of a change of applicable law or circumstances affecting the economy of the contract.

This agreement also specifies how the joint service will be governed (e.g., organized, monitored, and modified). It gives each company the freedom to develop its own operations within the joint service. If a decision made by a company has an impact, notably financial, on the other company, an impact study is conducted and any damage would be covered by payment of financial compensation and/or by an amendment to the agreement. Decisions relating to joint operations are made jointly by the two companies. Neither ERDF nor GrDF can impose a decision without the prior consent of the other party.

### 6.2.2.3 ISLAND ENERGY SYSTEMS

The Island Energy Systems (*Systèmes Énergétiques Insulaires*, or "SEI") comprise the electricity networks operated by EDF that are not interconnected or only connected to a very small extent to the continent: mainly Corsica, the French Overseas departments, and Overseas communities Saint Barthélémy, Saint-Martin and Saint-Pierre-et-Miquelon.

All of these territories correspond to "zones that are not interconnected with the network in metropolitan France" (*Zones Non Interconnectées au réseau métropolitain continental*, or "ZNI"), referred to in article 2 of the French law n° 2000-108 of February 10, 2000 as amended by the French law n° 2006-1537 of December 7, 2006. They share the following characteristics:

- these territories benefit from tariff equalization with continental metropolitan France; and
- the small size of their electrical network and the lack or the insignificance of their interconnection with a continental network means that the generation costs are structurally far higher than those in metropolitan France and, for this reason, much higher than the portion reflected in the tariffs.

This situation has notably for consequence that the legislator considers the additional generation costs in these SEI to be a public service charge and these costs are therefore compensated by means of a contribution to the public electricity service (*Contribution aux charges de service public de l'électricité*, or "CSPE") (see section 6.4.3.4 ("Public service in France")).

EDF's organization in each of these territories is therefore based on maintaining an integrated structure that guarantees the main part of generation and all supply-demand balance management functions, network operator functions (HTB, HTA and BT) and supplier functions,

In these territories, EDF is the main player in terms of electricity production with a fleet representing an installed capacity of 1,850 MW including 390 MW of hydroelectric capacity and 1,460 MW of thermal generation capacity. The total length of the electricity network is about 32,000 km (all voltage levels combined) and the number of clients was 1,019,700 at the end of December 2009.

In these networks, given the existing imbalance between the MWh generation cost and the sale price at the equalized tariff, EDF's sales activities consist of managing electricity demand, either alone or in partnership with the Environment and Demand-Side Management Agency (*Agence de l'Environnement et de la Maîtrise de l'Énergie*, or "ADEME") and local institutions.

Most of the Island Energy Systems, however, have experienced significant growth in their consumption (high rate of demographic growth and/or late technological developments in household equipment). This increase in demand must be met by the creation of new generation plants, which are decided upon by the Minister of Industry within the scope of the Multi-Year Investment Program, either by means of invitations to tender or by authorizing projects developed by private operators. The operators' interest, including EDF, to invest in SEI generation was strengthened by an order taken by the Minister of Industry, on March 23, 2006, setting to 11% the nominal remuneration rate before tax of fixed capital in production investments made in Corsica, Overseas departments, St Pierre and Miquelon and Mayotte.

#### RECENT EVOLUTIONS AND MID-TERM PROSPECTS

**Projected investments in generation between now and 2015**

The ministerial order that defined this Multi-Year Investments Program (*Programmation Pluriannuelle des Investissments*, or "PPI") was taken on December 15, 2009: it gives a figure of the objectives of implementation of centralized means of generation for the SEI of 1,043 MW in 2015. This figure covers the need to upgrade 6 of the 7 main diesel power stations.

On the basis of the strategy adopted, to remain, the leading actor in each of the Island Energy Systems, as regards installed capacity the EDF group has undertaken:

- a project to upgrade 6 of the 7 main diesel power stations beginning in 2010 in Corsica and in French Overseas departments. This project, which will also help satisfy emerging needs, will be conducted by a wholly-owned subsidiary of the Group "EDF Production Électrique Insulaire SAS", created for this purpose in December 2006. The project will provide a total of 840 MW by 2015. EDF Production Électrique Insulaire signed in October 2008 with the MAN corporate consortium – Clemessy – Eiffage a turnkey supply contract for the three power stations of East Port (La Réunion), Jarry North (Guadeloupe) and Bellefontaine 2 (Martinique), whose construction have already begun. This contract includes the possibility to supply the power stations of Corsica and of French Guiana with motor engines;
- construction of a hydropower station at Rizzanese (55 MW), in Corsica. This plant should be brought into service in 2012;
- extending the Rivière de l'Est Hydro Power Station (14 MW), on La Réunion. The extension should be put into service in 2010.

**Projected investments for electrical networks up between now and 2015**

Following the passage of Cyclone Gamede over La Réunion (February 2007), followed by Hurricane Dean in Martinique and Guadeloupe (August 2007), EDF has initiated for the 2008-2010 period a €40 million program for reconstructing the networks in these Overseas departments or improving resistance to tropical storms.

Moreover, continued growth of consumption in these territories, and the development of renewable energies, will lead the EDF group to continue to strengthen the electrical network. In view of the presence of nature parks in Corsica and the Overseas departments *(Départements d'Outre-mer)*, new high voltage connections will be created underground and underwater accordingly.

### 6.2.2.4 TARIFFS FOR USING THE PUBLIC ELECTRICITY TRANSMISSION AND DISTRIBUTION NETWORKS (*TARIF D'UTILISATION DES RÉSEAUX PUBLICS DE TRANSPORT ET DE DISTRIBUTION D''ÉLECTRICITÉ*, OR "TURPE")

Pursuant to French law n° 2000-108 of February 10, 2000, the tariffs for use of the transmission and distribution networks are adopted jointly by the Minister of the Economy and the Minister in charge of the Energy, following a proposition by the Energy Regulation Commission (CRE).

The current tariffs for use of the public transmission and distribution networks (TURPE 3), approved by a ministerial ruling of June 5, 2009 and published in the *Journal Officiel* on June 19, 2009, came into force on August 1, 2009. The tariffs for use of the public electricity transmission and distribution networks are determined so as to cover:

- the costs of transmission and distribution activities integrating the productivity targets set by the regulator;
- financial compensation equal to the product of the regulated asset base, estimated on January 1, 2009 at €10,408 million for transmission and €28,450 million for distribution, based on a fixed rate of remuneration corresponding to a nominal rate before tax of 7.25%.

In addition, the CRE has set up a mechanism to compensate for the effects on income and expenditure of external factors that are beyond the control of the network managers. This income and expenditure adjustment account ("CRCP") is an off-balance sheet record under previously identified items of all or part of any excess or shortfall experienced by the network manager to be discharged by a decrease or increase in the charges to be recovered through the tariffs for use of the public electricity networks over the following five years.

Consequently, the proposition of the CRE, which is designed to enable network managers to cover their costs over a period of 4 years starting from 2009, foresees a rise during its application of 2% in the tariff for use of the transmission network and 3% in the tariff for use of the distribution networks. From 2010 to 2012, the tariff scales will change according to the rate of inflation plus 0.4% in the case of the transmission network and plus 1.3% in the case of the distribution network, plus an income and expenditure adjustment account ("CRCP") discharge factor, the absolute value of which may not exceed 2%.

The adoption of tariffs over a period of four years guarantees improved visibility for transmission and distribution network managers as regards changes in their income. This extension of the tariff period also simplifies the application of adaptations that will help them control costs and improve quality, along with other measures that have been adopted.

The CRE, for example, has adopted incentives to control costs and improve quality to help the network managers improve the technical and economic efficiency of their operations during the tariff period, while nonetheless ensuring compliance with the public service missions entrusted to them.

To this end the CRE has accepted the productivity gain levels on controllable operating costs proposed by the network managers. If a network manager makes additional efforts during the tariff period, the additional productivity released will be shared between the network manager and the final customer. The CRE has also adopted a specific measure aiming to encourage network managers to control the costs associated with the compensation of network losses.

These provisions are accompanied by a regulatory scheme encouraging transmission network managers to improve the quality offered to users, in terms of both power supply and quality of service. This quality incentive scheme in particular helps ensure that network managers do not realize productivity gains at the expense of quality levels.

## 6.3 Presentation of the EDF group's international activity

The EDF group is positioned as an energy leader, with a priority aim of investing for sustainable and profitable industrial growth, based on the development of our skills and the promotion of our technical expertise. The group intends to continue to strengthen its international businesses, as a complement to its activities in France. In 2009, the sales and earnings before interest, taxes, depreciation and amortization (EBITDA) of International and Other Activities represented 48.7% of the sales and 46% of the EBITDA of the EDF group (see section 9.7 ("Breakdown of EBIT by geographical area")).

The international activities of the EDF group develop the core strategies of the group on an operational level (see section 6.1 ("Strategy")). These strategies involve the reinforcement of our European positions, and the international deployment of our nuclear activities and projects and other key projects.

### A. REINFORCING OUR EUROPEAN POSITIONS

In 2009, the EDF group consolidated its leadership in Europe in terms of its positions, principally through the following achievements:

- leadership of the EDF Energy-British Energy integration project;
- asset swaps between EDF, EnBW and E.ON in France and in Germany;
- acquisition of 51% of the Belgian operator SPE;
- modification of its direct holding (25%) in Alpiq Holding SA, the major new Swiss energy corporation created by the merger of ATEL and EOS;
- increase of its holding in Austrian energy corporation Estag (from 20 to 25%);
- commissioning at end 2009 of the new natural gas plant of Sloe in the Netherlands in which EDF has a 50% stake;
- pursuit of the organizational integration of its subsidiaries in Poland;
- conclusion of a framework agreement between EDF and O.A.O. GAZPROM relative to the possibility of EDF participating in the construction of the South Stream underwater gas pipeline.

### B. INTENATIONAL NUCLEAR

As the largest nuclear generator in the world, the EDF group has acquired major technical assets (in operations and engineering) and solid experience in constructing and operating nuclear plants in France (fleet of 58 reactors), Germany (through EnBW plants), the United Kingdom (with the acquisition of British Energy) and the US (through Constellation Energy Nuclear Group, LLC and its subsidiaries, "CENG"), which will allow us to be a major player in the revival of nuclear power internationally.

EDF has set itself five criteria for involvement in international nuclear projects. The issue is to select countries that:
- have chosen nuclear power in the short term;
- are known to EDF and where EDF is welcome;
- offer favorable conditions to investors in nuclear energy (legislative framework, waste management, public opinion etc.);
- are interested in projects involving known reactor models;
- are consistent with the financial aims and risk policy of the Group.

EDF has thus already identified a certain number of geographical priorities: the United Kingdom, China, the United States, Italy, and South Africa. EDF is also examining other opportunities (see section 6.1.3. ("Be a major player in the global revival of nuclear energy") above).

In each of these countries, EDF adapts to the institutional context and the industrial environment. The resulting organizational models may be different each time.

### C. ACHIEVEMENT OF OTHER KEY INTERNATIONAL PROJECTS

Sure of its technological expertise and clear in its determination to help limit the environmental impact of electricity production by using the best available technologies locally, the EDF group intends in particular to:

- benefit from the opportunities associated with the most recent technologies (supercritical coal-fired plants such as the one in Sanmenxia in China in which the EDF group took a 35% shareholding in June 2009);
- contribute to the development of $CO_2$ capture, transportation and storage technologies ("CCS: Carbon Capture & Sequestration");
- actively seek major hydroelectric infrastructure projects, in line with a local policy of sustainable development.

In this perspective, the EDF group is examining the advantages of setting up partnerships in order to participate in the design, construction and operation of new thermal or hydro power plants on an international level.

## 6.3.1 Europe

### EUROPEAN CONTEXT

The economic crisis has resulted in a fall in electricity and gas consumption in Europe (see section 6.1 ("Strategy").

The trend towards increased integration of the electricity and gas markets was maintained during 2009:
- consolidation of electric commodities exchanges with the creation of EPEX, resulting from the merger of the spot operations of Powernext in France and EEX in Germany;
- pursuit of the regional initiatives launched by the European Commission with the aim of harmonizing and improving methods of managing congestion on the interconnections; the harmonization of market transparency; the development of cross-border energy adjustment exchanges;
- adoption of regulations instituting the creation of a European Agency for the Cooperation of Energy Regulators (ACER), a European network of electricity transmission network managers (REGRT) and a European network of gas transmission network managers (REGRT for gas) in order to ensure optimal management of transmission networks.

2009 ended with the UN conference at Copenhagen and the signature of an international agreement recognizing the scientific consensus, which called for the increase in global temperature to be limited to a maximum of 2 degrees in order to curb the worst effects of climate change. The Copenhagen Agreement thus calls for a reduction in worldwide emissions of greenhouse gases.

In this context, the intention of the EDF group is to remain a major player in the development of a fluid European energy market by participating actively in its construction (interconnections, harmonization of practices etc.), while maintaining a special commitment to sustainable development.

### THE GROUP'S AMBITIONS IN EUROPE

The EDF group's ambition is to consolidate a coherent industrial group with its current main positions in Europe and it will review any new opportunity of profitable development in Europe which is its "core market".

Besides, the Group intends to continue building its gas assets, which are necessary to its ambition of becoming an active energetician in the gas and electricity sector in Europe, in order to secure its offer, to provide its customers with a multi-energy offer and to ensure a competitive supply of means of Group's electricity generation through gas.

The Group is also implementing operational synergies among its various entities in France and Europe with the following actions:
- to improve the operational performances by sharing the best practices observed within the Group;
- to use the opportunity of construction projects of generation assets in the various subsidiaries in order to standardize the conception and to group the purchase orders to equipment manufacturer; and
- to coordinate the gas supplies and investments in order to further the Group's ambitions in the gas market.

The table below sets forth the general features of the EDF group's main subsidiaries and holdings in Europe (as of December 31, 2009):

| Company name | Main activities | Technical data |
|---|---|---|
| **Germany** | | |
| EnBW | Electricity Generation,<br>Electricity Transmission, Distribution,<br>Gas Transmission, Distribution,<br>Electricity and Gas Sales Services | Number of customers: approximately 6 million[1]<br>Installed electric capacity: 15.8 GW<br>Gas sales: 65.8 TWh |
| **United Kingdom** | | |
| EDF Energy | Electricity Generation,<br>Electricity Distribution,<br>Electricity and Gas Sales Services | Number of customers-accounts: approximately 5.6 million[1]<br>Installed electric capacity: 12.8 GW<br>Gas sales: 27.3 TWh |
| **Italy** | | |
| Edison | Electricity Generation,<br>Electricity Sales,<br>Gas Production, Storage and Sales | Number of customers: 540,000[1]<br>Installed electric capacity: 12.3 GW<br>Gas activity: 13.2 $Gm^3$ [2] |
| Fenice | Electricity and Heat Generation,<br>Energy and Environment Services | Installed electric capacity: 521 MW<br>Installed thermal capacity: 3,215 MWth[3] |
| **Spain** | | |
| Elcogas | Electricity Generation | Installed electric capacity: 335 MW |
| **Poland** | | |
| EC Wybrzeze | Electricity and Heat Generation | Installed electric capacity: 331 MW<br>Installed thermal capacity: 1,199 MWth[3] |
| Elektrownia Rybnik S.A. (Ersa) | Electricity Generation | Installed electric capacity: 1,775 MW |
| EC Krakow | Electricity and Heat Generation | Installed electric capacity: 460 MW<br>Installed thermal capacity: 1,118 MWth[3] |
| Kogeneracja | Electricity and Heat Generation | Installed electric capacity: 363 MW<br>Installed thermal capacity: 1,106 MWth[3] |
| Zielona Gora | Electricity and Heat Generation | Installed electric capacity: 221 MW<br>Installed thermal capacity: 322 MWth[3] |
| **Hungary** | | |
| BE ZRt | Electricity and Heat Generation | Installed electric capacity: 409 MW<br>Installed thermal capacity: 1,366 MWth[3] |
| DÉMÁSZ ZRt | Electricity Distribution<br>Electricity Sales | Number of delivery points: 774,000 |
| **Slovakia** | | |
| SSE | Electricity and Heat Distribution<br>Electricity, Gas and Heat Sales | Number of customers: 640,000 |
| **Austria** | | |
| Estag Group | Electricity, Gas and Heat Distribution<br>Electricity, Gas and Heat Sales Services | Number of delivery points: approximately 344,000 |
| **Switzerland** | | |
| Alpiq | Electricity, Generation, Trading and Sales | Installed electric capacity: 6,322 MW |
| **Belgium** | | |
| EDF Belgium[4] | Electricity Generation Electricity and Gas Sales Services | Installed electric capacity: 419 MW<br>Number of customers sites: 5,041 |
| SPE | Electricity Generation<br>Electricity and Gas Sales | Installed electric capacity: 1,969 MW<br>Number of delivery points: 1,580,000 |
| **Netherlands** | | |
| SloeCentrale B.V. | Electricity Generation | Installed electric capacity: 870 MW |

Gross values, not adjusted for percentage of ownership interests (including the minority interests).

*(1) Including gas.*

*(2) Gross global gas volumes handled by the Group's companies including plants' internal consumption.*

*(3) MWth: thermal MW for cogeneration, as opposed to electric MW.*

*(4) EDF Belgium owns 50% of the Tihange 1 nuclear power plant.*

*For more information on the consolidation method at December 31, 2009, see note 3.3 to the consolidated financial statements as of December 31, 2009.*

*In addition, EDF has a 50% interest in Dalkia International[1], through its subsidiaries and holdings operating in the energy-related services sector (see section 6.4.1.4 ("Dalkia")).*

### 6.3.1.1 UNITED KINGDOM

For information about price movements and electricity consumption in the United Kingdom, see section 9.2.1 ("Economic environment") of this *Document de Référence*.

In 2008, total electricity generation in the United Kingdom ("UK") was 389.6 TWh and there were 28.7 million customer connections. Of the total gas and electricity supplied to customers in 2008, 610.5 TWh was gas and 341.5 TWh was electricity (source: Department of Energy and Climate Change). Data relating to 2009 is not available as at the date of this *Document de Référence*.

EDF Energy's main competitors in the generation sector in the UK are: RWE, E.ON, Scottish and Southern Electricity ("SSE"), Scottish Power and Centrica, with E.ON, SSE and RWE being its biggest competitors. In the distribution sector, EDF Energy's largest competitor is E.ON, with CE Electric, SSE, Scottish Power, Western Power Distribution and Electricity North West also being significant players. EDF Energy's main competitors in both the gas and electricity supply market include SSE, British Gas (Centrica), RWE, E.ON and Scottish Power.

#### 6.3.1.1.1 INTRODUCTION

2009 was a year of significant change for EDF Energy. The Acquisition of the British Energy group ("British Energy") by the EDF group (the "Acquisition") became effective on January 5, 2009. The combination of EDF Energy plc. and British Energy will henceforth be referred to as "EDF Energy" in this *Document de Référence*. EDF Energy is making good progress with the integration of the two businesses and the financial results for the year ended December 31, 2009 highlight the strength of the new combined business. In the year ended December 31, 2009 EDF Energy's total revenue and EBITDA were £9,836 million (€11,052 million[2]) and £2,702 million (€3,036 million[2]) respectively.

EDF Energy forms one of the UK's largest energy companies, employing around 20,000 people at locations throughout the UK. After the Acquisition, the new EDF Energy became the number one distributor of electricity (as measured by volume of electricity distributed and value of regulated asset base) and the number one electricity supplier (as measured by TWh sold) in the UK. EDF Energy was also the UK's largest producer of electricity and the largest generator of low carbon electricity. In the prior year, before the Acquisition, EDF Energy was ranked number one distributer of electricity, number two electricity supplier and number five electricity producer.

EDF Energy plays a major role in national infrastructure projects including the management of private electricity networks serving four London airports and the Channel Tunnel Rail Link, the country's first major new railway in 100 years.

During 2009, EDF Energy rolled out a series of nationwide campaigns, increasing awareness of the brand and the association of the brand with sustainability and the 2012 Olympics (see section 6.3.1.1.3 ("London 2012 Olympic Games")). EDF is the official energy utilities partner and sustainability partner of the London 2012 Olympic and Paralympic Games.

1 Indirect stake owned by EDF through Veolia Environnement excluded.

2 Figures do not correspond directly to those in the consolidated accounts of EDF group.

EDF Energy published *Our Climate Commitments* in 2007 and *Our Social Commitments* in 2008, which combined, at the time, was the largest package of environmental and social measures[3] announced by any UK energy company.

On May 11, 2009 EDF announced that it had reached an agreement with Centrica plc. ("Centrica"). Under the terms of the agreement Centrica will invest in EDF's (existing and future) nuclear business in the UK. The transactions provided for under this agreement became effective on November 26, 2009 (see section 6.3.1.1.1.3 ("Centrica Transactions")).

##### *6.3.1.1.1.1* Strategy

EDF Energy operates in a complex market environment characterized by volatile commodity markets, high levels of competition and, despite liberalization, Government interventions to deliver changing energy objectives. Notwithstanding the current economic downturn, demand for electricity is expected to increase in the long term as decarbonisation policies prompt fuel switching from gas and oil to low carbon electricity particularly in the heat and transport sectors.

EDF Energy seeks to add business value by delivering integration synergies following the Acquisition, delivering continued operational excellence, securing life extensions (beyond those already declared) to existing nuclear plants in the UK, and by leading the revival of nuclear new build in the UK. EDF Energy plans to build four new European Pressurized Reactors ("EPR") in the UK with the first planned to be in commission by 2017, subject to the right investment conditions (see section 6.3.1.1.2.4 ("Nuclear New Build business unit")).

Other important strategic actions include the delivery of the new West Burton B CCGT and a fast cycle gas storage project, managing the impact of the phase out of coal generation capacity driven by the Large Combustion Plant directive ("LCPD") and the Industrial Emissions directive ("IED"), and continued delivery of renewable generation projects. Downstream, EDF Energy aims to improve the profitability of its customer business through development of people, systems and processes.

On the regulated side, the highlight in 2009 was the final determination put out by the Office of Gas and Electricity Markets ("Ofgem") on the fifth Distribution Price Control Review ("DPCR 5"). It was made public on December 7, 2009 and was accepted by EDF Energy on December 23, 2009. EDF Energy is confident that the Network 1st program that has been developed by the Networks business unit Executive team will allow a robust performance to be delivered over the period 2010-2015 (see Distribution price controls in section 6.3.1.1.2.1 ("Networks business unit")).

In order to achieve its strategic ambitions, developing and retaining high performing people remains central to EDF Energy's core values. EDF Energy has continued to invest heavily in the training and development of its people across the business, with 100,000 training days being attended by EDF Energy employees in 2009. To support its significant plans for investment in the UK, EDF Energy expects to recruit 10,000 employees over the next five years, with half of these being new positions created by expansion.

On October 2, 2009, EDF announced that it was launching a process to evaluate ownership options for EDF Energy's electricity distribution networks business (both regulated and unregulated). Whilst such a review is underway, the key priority for the EDF Energy networks business is to remain

3 Commitments include reducing the intensity of $CO_2$ emissions from EDF Energy's electricity generation production by 60% by 2020, reducing the proportion of $CO_2$ arising from EDF Energy's customers' energy consumption by 15% by 2020 and committing to keep prices competitive and providing enduring support for the most vulnerable supply customers until 2012.

focused on managing and maintaining safe, secure and sustainable electricity supplies across EDF Energy's three network regions.

### *6.3.1.1.1.2* Structure of the Group

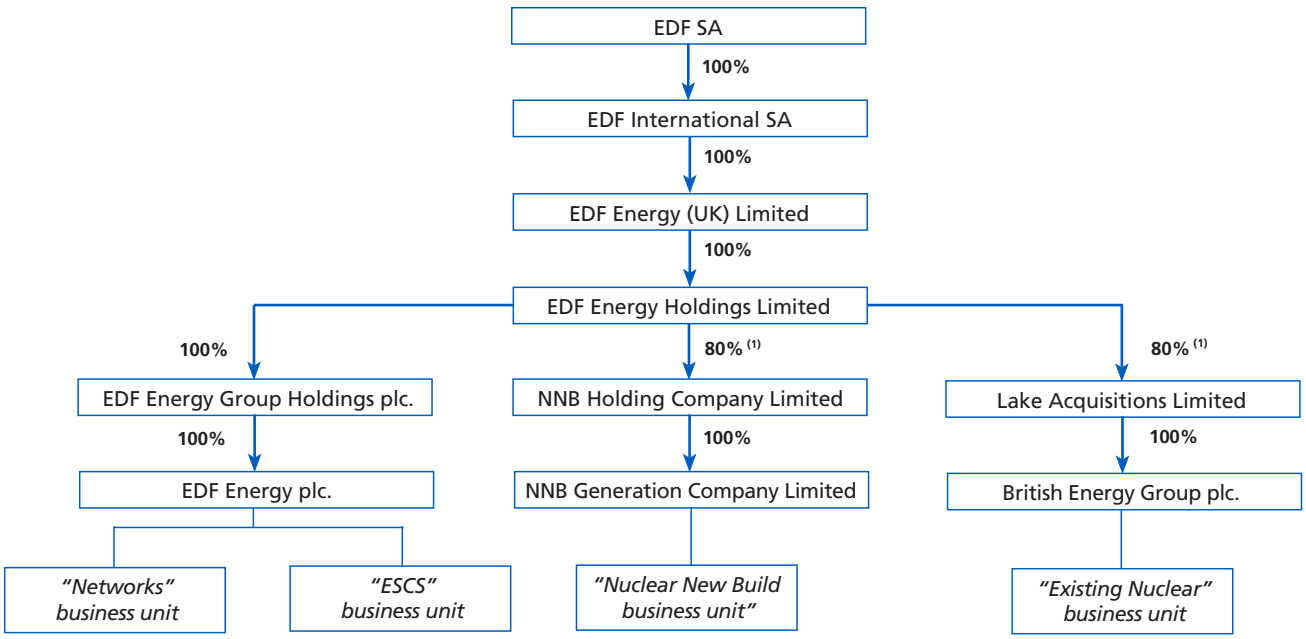
EDF Energy is a vertically integrated company. Prior to the Acquisition, EDF Energy plc. participated in the generation and distribution of electricity and supply of electricity and gas in the UK through its Networks, Energy and Customers Branches.

Following the Acquisition, the businesses of EDF Energy plc. and British Energy have been integrated and re-organised into four main business units: Networks, Energy Sourcing and Customer Supply ("ESCS"), Existing Nuclear and Nuclear New Build. These business units are supported by two steering functions and three corporate functions.

The company structure has also changed to accommodate the integration. A new holding company, EDF Energy Holdings Limited, is the direct parent company of EDF Energy Group Holdings plc. and Lake Acquisitions Limited. EDF Energy Holdings Limited is also the direct parent company of the new entity, NNB Holding Company Limited, within which all nuclear new build activity now exists.

Below is a simplified diagram of the reorganized EDF Energy group structure:

**EDF Energy Group Structure**




(1) Remaining 20% owned by Centrica plc., with effect from November 26, 2009 (see section 6.3.1.1.1.3 ("Centrica Transactions")).

### *6.3.1.1.1.3* Centrica Transactions

On November 26, 2009, EDF and Centrica successfully finalized an agreement which was first announced on May 11, 2009 enabling Centrica to invest in EDF Energy's nuclear business in the UK ("Centrica Transactions"). The main elements of the Centrica Transactions are:

***British Energy Transaction***

- Centrica acquires a 20% shareholding in Lake Acquisitions Limited under a subscription and investment agreement. Following the acquisition, EDF Energy and Centrica own British Energy on an 80/20 basis;
- EDF Energy operates British Energy, with Centrica having board representation and other appropriate governance rights;
- EDF Energy and Centrica offtake the available power from the Existing Nuclear fleet on an 80/20 basis; and
- under a separate power purchase agreement, EDF Energy will provide Centrica with an additional 18 TWh of power at market prices over five years from 2011.

***Nuclear New Build Arrangements***

It was also announced that EDF Energy and Centrica will form a separate 80/20 arrangement ("NNB Holding Company Ltd.") through which they will

undertake the pre-development activities for a planned Nuclear New Build programme in the UK. EDF Energy and Centrica intend this joint venture to construct, operate and decommission four EPRs in the UK (see section 6.3.1.1.2.4 ("Nuclear New Build business unit")).

***SPE Transaction***

In addition, Centrica has sold 100% of its stake in Segebel S.A., a wholly-owned subsidiary of Centrica whose principal asset is a 51% stake in SPE S.A., to EDF for €1.3 billion (see section 6.3.1.4.2 ("Benelux")).

#### *6.3.1.1.1.4* Group Synergies and Operational Excellence

In 2009, EDF Energy began to implement the synergies from the Acquisition through integration of the various businesses, with £65 million of integration synergies being delivered, in line with plan. The synergy target from the Acquisition is €200 million in the first three years to 2011. This target has been integrated into its overall Operational Excellence program in support of EDF group's wider agenda.

During 2009 EDF Energy's Operational Excellence program significantly supported EDF Energy's EBITDA in particular through the gains achieved by the ESCS business unit from optimizing the option value of its coal plants and the accelerated transfer of customers on to direct debit payment. Furthermore, the Networks business unit improved its productivity through a better quality of data for identifying the need for capital replacement and thereby reducing faults on the networks.

### 6.3.1.1.2 EDF ENERGY

**EDF Energy's operational and financial results**

In 2009, EDF Energy distributed electricity to around 8 million homes and businesses in London, the East and South-East of England over a network of 182,000 km. In addition, EDF Energy supplied 66.1 TWh of electricity and 27.3 TWh of gas to residential and industrial and commercial customers. At the end of 2009, EDF Energy had 5.6 million customer product accounts comprising residential customers, small and medium enterprises ("SMEs") and major business account holders.

At December 31, 2009, EDF Energy owned and operated eight nuclear power stations, and two coal-fired power stations, which in total generated 71.3 TWh of electricity in the year, around one fifth of the UK's electricity. In addition, EDF Energy owned one coal-fired power station (Eggborough) and one gas-fired power station (Sutton Bridge), both of which are managed independently by Hold Separate Managers in compliance with the European Commission commitments made at the time of the Acquisition (see section 6.3.1.1.2.6 ("Commitments under the European Commission Merger Regulation")).

The following table sets out key statistics for EDF Energy for the year ended December 31, 2009, incorporating the results for British Energy from January 6, 2009. Also presented are results for EDF Energy plc for the year ended December 31, 2008, alongside results for British Energy for its financial year ended March 31, 2008.

| | EDF Energy December 31, 2009[1] | EDF Energy plc December 31, 2008[1] | British Energy March 31, 2008 |
|---|---|---|---|
| **SALES[2] (millions of Euros)** | **11,052** | **8,244** | **3,503** |
| *Electricity* | 8,778 | 5,857 | 3,489 |
| *Gas* | 977 | 1,071 | – |
| *Other* | 1,297 | 1,321 | 14 |
| **EBITDA[2] (millions of Euros)** | **3,036** | **958** | **1,099** |
| **Net assets[2] (millions of Euros)** | **17,452** | **3,176** | **5,230** |
| Electricity supplied (GWh) | 66,131 | 52,069 | 27,128 |
| Gas supplied (GWh) | 27,299 | 30,298 | – |
| Number of customer accounts (thousands) | 5,612 | 5,560 | 2 |
| **Total capacity (MW)[3]** | **12,783** | **4,863** | **10,768** |
| Nuclear | 8,723 | – | 8,808 |
| Coal[3] | 4,020 | 4,020 | 1,960 |
| Gas[3] | 40 | 843 | – |
| **Total output (TWh)[3]** | **71.3** | **27.2** | **58.4** |
| Nuclear | 54.5 | – | 50.3 |
| Coal[3] | 16.8 | 21.5 | 8.1 |
| Gas[3] | – | 5.6 | – |
| Networks Regulated Asset Value (billions of £) (March 31) | 3.7 | 3.5 | n/a |
| Networks Regulated Asset Value (billions of €) (March 31) | 4.2 | 3.7 | n/a |
| Number of employees | 20,077 | 13,406 | 6,121 |

*(1) The exchange rates applied to the balance sheet are £1 per €1.125999 in 2009 and per €1.049869 in 2008 and for the figures in the income statement, £1 per €1.123622 in 2009 and per €1.246022 in 2008.*

*(2) EDF Energy is consolidated into EDF group financial results for the years ended December 31, 2009 and 2008. British Energy is consolidated into EDF Energy and EDF group financial results from January 6, 2009.*

*(3) 2009 figures exclude Sutton Bridge power station and Eggborough power station following implementation of the Hold Separate Arrangements. 2008 figures for EDF Energy include Sutton Bridge power station and 2008 figures for British Energy include Eggborough power station.*

### *6.3.1.1.2.1* Networks business unit

The Networks business unit operates the three contiguous licensed distribution networks in London, the East of England and the South-East of England, along with a number of private networks and infrastructure projects, and contributes significantly to the earnings of EDF Energy. As required by Ofgem in its regulation of Distribution Network Operators ("DNO"), the companies which form Networks are managed and operated as separate legal entities from the rest of EDF Energy and their financing is ring-fenced so as not to restrain or hinder competition or create distortions in competition in relation to the supply of electricity or gas, electricity generation or the transmission of gas.

On October 2, 2009, EDF announced that it is initiating a process to evaluate ownership options for its electricity distribution business in the UK.

#### *Public networks*

EDF Energy's network covers over 29,000 km$^2$ and distributes 84 TWh of electricity annually through 47,000 km of overhead wires and 135,000 km of underground cables. EDF Energy is the largest distributor of electricity (by volume and regulated asset value) in the UK, distributing electricity to around 8 million homes and businesses.

Each distribution network operates under very different operating conditions with a concentrated urban network in London and a mix of rural and urban networks in the South and East of England. EDF Energy invested nearly £590 million in its network during 2009 on asset replacement, reinforcement and extension. The network performance is stronger in London in terms of continuity of supply due to the fact that it is almost entirely underground and is less affected by the extremes of weather, whereas a proportion of the network serving the other regions is above ground.

The Networks business generates income predominantly through Distribution Use of System ("DuoS") charges levied against the supply companies that the end customer has a contract with. The charges levied by EDF Energy's DNOs are among the lowest in the UK.

#### *Distribution price controls*

The regulated businesses are subject to a five-year price control which is the result of data analysis and negotiations which take place during the period leading up to the period to which the price control relates. The new price control, DPCR 5, is effective from April 1, 2010. Final proposals were issued by Ofgem on December 7, 2009 and on December 23, 2009 EDF Energy announced that it had indicated acceptance of the proposals to Ofgem. The price control will set levels of capital expenditure to be incurred over the period April 1, 2010 to March 31, 2015 against which a financial return will be made. The financial return is collected via charges for the use of the electricity distribution network which are intended to recover depreciation of the regulated asset base, an efficient level of operating costs and a reasonable profit margin.

The main elements of the price reviews conducted by Ofgem are:

- Setting the allowed level of return on the Regulatory Asset Value ("RAV");
- Setting operating expenditure and capital expenditure allowances; and
- Setting other incentive mechanisms.

In the previous review period operating through to March 31, 2010 (DPCR 4), EDF Energy has delivered the required capital works on its networks below the cost levels allowed by Ofgem and overspends on operating costs have been offset by outperformance on other incentive mechanisms. This should lead to a comfortable level of over performance in the period.

As part of the DPCR 5 final proposals accepted by EDF Energy, network capital investment of £1.6 billion has been allowed over the period 2010 to 2015 (compared to £1.4 billion[1] expected to be spent in the DPCR 4 period).

#### *Fluid filled cables*

Like all distributors in the UK, EDF Energy's networks contain Fluid Filled Cables ("FFCs"). These cables can leak and pollute ground soil. The Environment Agency, Ofgem and distributors have had discussions concerning this matter.

EDF Energy has conformed to current best practice in developing its leak management strategy whilst monitoring and analyzing leakage rates. Operational techniques have also been developed alongside the longer-term strategic view. In particular, the business has developed a new leak location technique over several years. This has been implemented and additional developments are now in hand to further improve the technology.

#### *Competition Act and licence compliance investigations involving EDF Energy*

In 2008 Ofgem started an investigation into EDF Energy for non compliance with Licence Conditions LC4 and LC12 regarding the timely provision of quotes to customers requiring connection to EDF Energy's network. In 2009 Ofgem found EDF Energy had failed to provide a small number of connection quotes to customers within the required three month period and levied a £2 million fine split across the three licensed DNOs. EDF Energy has introduced revised procedures and has had no further failures since October 2008.

#### *EDF Energy services – private networks and Private Finance Initiatives/Public Private Partnerships ("PFIs/PPPs")*

EDF Energy provides a wide range of commercial and technical solutions for infrastructure projects and a number of Private Finance Initiatives ("PFIs") and Public-Private Partnerships ("PPPs") asset infrastructure and electrical distribution networks projects.

EDF Energy has built up a portfolio of contracts through successfully winning PFI/PPP asset infrastructure and electrical distribution networks projects such as the London airports of Heathrow, Gatwick and Stansted; the Docklands Light Railway Lewisham Extension; and several commercial buildings in London Docklands.

EDF Energy also has a number of joint venture investment projects including an 80% interest in the Powerlink consortium, a 30 year contract to maintain and upgrade the high voltage electrical distribution network for the London Underground system, and a 50% interest in MUJV Limited, a joint venture formed between EDF Energy and Thames Water Services to design and lay all water, wastewater, gas and electricity pipes/cables to the new buildings that Aspire Defence is building for the Ministry of Defence.

EDF Energy's contracting business has several major contracts with customers including Network Rail (Power Supply Upgrade), Pfizer Pharmaceuticals, London Underground and Islington Highway Lighting.

#### *EDF Energy Metro Holdings – Metronet*

As well as the Powerlink contract referred to above, which is focused on the supply and maintenance of existing electrical assets for London Underground, EDF Energy was also part of the Metronet Joint Venture. This was a 30 year PPP contract with London Underground, commencing in April 2003, to renew, upgrade and maintain two thirds of the London Underground network. EDF Energy's interests in Metronet are a 20% interest in the Metronet Consortium and a 25% interest in Trans4m Limited.

Metronet Rail SSL Limited and Metronet Rail BCV Limited, which make up the Metronet Consortium, were placed into PPP administration on July 18, 2007.

1 Figures stated in constant 2007/08 prices.

On May 27, 2008 the PPP contracts were transferred to a new Transport for London (TfL) entity with the surviving contractual terms between the Metronet Consortium and Trans4m Limited remaining with the companies in administration. The administrators presented a winding up petition to the courts on December 11, 2009 for the companies in administration. This was granted and the companies have now entered into a liquidation process.

#### *6.3.1.1.2.2* Energy Sourcing and Customer Supply business unit ("ESCS")

The Energy Sourcing and Customer Supply ("ESCS") business unit has the responsibility for maximizing the long term value of EDF Energy's residential and business customers, generation assets and optimization on energy markets.

As a condition of the Acquisition, new trading arrangements have been put in place in EDF Energy with regard to the sale of nuclear volumes. All power generated by the Existing Nuclear fleet is sold through intragroup transactions from the Existing Nuclear business unit to the ESCS business unit. From April 2010, 20% of the generation output from the Existing Nuclear business unit will be sold to Centrica as part of the Centrica Transactions (see section 6.3.1.1.1.3 ("Centrica Transactions")). Obligations under existing British Energy contracts in place at inception of the new trading arrangements on March 24, 2009 will continue to be met. In addition, British Energy Direct Limited ("BE Direct" – British Energy's customer facing business), was transferred from British Energy and is now managed within the ESCS business unit.

These changes enable the ESCS business unit to manage wholesale market risks centrally, and to take advantage of the benefits of combining energy sourcing activities for the existing EDF Energy and BE Direct supply businesses.

### *A. Energy Sourcing*

*Generation*

The part of EDF Energy's generation business that is held within ESCS (which excludes nuclear generation, Sutton Bridge and Eggborough) comprises two fossil fuel generation power plants in the UK with a total generation capacity of 4.1 GW, namely:

- Cottam: located in Nottinghamshire, Cottam is a coal-fired power plant with a capacity of 2,008 MW generated by four units. The final unit was commissioned in 1970; and
- West Burton: located in Nottinghamshire, West Burton is a coal-fired power plant consisting of four coal-fired units and two 20 MW CCGTs, with a total capacity of 2,052 MW. The final unit was commissioned in 1970.

In addition EDF Energy has interests in three Combined Heat and Power ("CHP") schemes with a total generation capacity of 25.4 MW, owns four 10 MW gas fired plants and has an 18.6% shareholding in Barking power station, located in London.

In the year ended December 31, 2009, Cottam and West Burton power plants generated 16.8 TWh of electricity. The output from these plants is broadly equivalent to the customer demand from EDF Energy's residential and SME accounts. Demand from large business customers whose consumption is measured on a half-hourly basis is covered through back to back wholesale market purchases.

The Acquisition and the new trading arrangements between British Energy and EDF Energy that followed, provide further capacity to meet customer demand.

*Renewables*

EDF Energy is committed to developing both its own assets and power purchase agreements supporting independent renewable developers to ensure a balanced approach for both compliance with its Renewables Obligation ("RO") and the provision of renewable electricity to its customer base. The RO is an obligation on all UK licensed electricity suppliers to source a growing percentage of their annual electricity sales from renewable sources.

EDF Energy and EDF Énergies Nouvelles, through their 50/50 joint-venture company EDF Energy Renewables Limited ("EDF Energy Renewables") established in 2008, have continued to develop and seek opportunities to deliver their physical renewable portfolio. During 2009, the operational portfolio increased by 46 MW following the construction of Longpark and Broomhill wind farms.

The joint-venture partners now own, operate, or have consent for, wind farms in the UK with a total expected capacity of 365 MW. In addition there are a number of other projects which are in earlier phases of development.

*Fuel and energy purchasing and risk management*

*General principles*

The activities of the energy purchasing and risk management business are consistent with the policy of EDF and ensure that EDF Energy's generation activities are optimized and energy is provided at a competitive price to its supply business. EDF Energy buys and sells power and purchases gas, coal, carbon and other required commodities on the wholesale markets to fulfill the needs of its generating plants and EDF Energy's customers.

*Electricity procurement*

Over and above its own generation, EDF Energy buys electricity through:

- long-term purchase contracts with Barking power station (in London) and with Scottish and Southern Energy. In 2009, these electricity purchase contracts represented approximately 4.2 TWh of electricity;
- contracts with generators who are connected directly to distribution networks, without the need for the transmission network hence avoiding associated costs. These are mainly electricity generators using renewable energy sources. In 2009, EDF Energy purchased approximately 3.2 TWh from this market; and
- wholesale purchase contracts entered into with third parties and subject to EDF Energy's agreed risk management policies. In 2009, EDF Energy purchased approximately 24.4 TWh by this method.

*Gas, coal and carbon rights procurement*

Coal and gas contracts (physical and financial) are entered into by EDF Energy, as well as financial carbon rights procurement, to hedge electricity output from its power plants.

Coal and carbon rights purchases are based on generation forecasts and target coal stock levels. The EDF Energy contract portfolio comprises approximately 51% of coal purchased from the UK and 49% from international sources. In 2007, 2008 and 2009, EDF Energy entered into various coal supply contracts with indigenous coal producers at a price lower than the delivered market price for imported coal.

The ESCS business unit has a growing exposure to wholesale market gas prices through increased retail, industrial and commercial demand and gas generation. The ESCS business unit is working with other companies in the EDF group, (EDF Trading and EDF Gas Division), to explore opportunities to access long term supply contracts or invest in gas assets to achieve better long term management of the risks associated with gas procurement.

In addition the ESCS business unit is, together with EDF, exploring investment opportunities in gas storage facilities to manage the risks of gas price volatility and is currently developing a fast cycle gas storage facility alongside EDF Trading's existing Hole House gas storage facility in Cheshire. EDF Energy will continue to consider opportunities for investment in further gas storage facilities that can help to manage the exposure to seasonal spreads and volatility of wholesale gas prices.

### *B. Customer Supply*

Retail tariffs tend to follow the overall trend of commodity prices over the long term but do not reflect their short term volatility. As a result, a hedging strategy that efficiently smoothes market volatility is regarded as a key competitive factor for all electricity and gas suppliers in the UK market.

An electricity price reduction was implemented by EDF Energy on March 31, 2009, with the majority of electricity customers seeing their prices fall by between 4.5% and 12.5%, depending on the areas. In line with Ofgem's latest recommendations, the gas unit prices for single fuel and prepayment customers are now aligned to dual fuel prices, meaning customers pay the same unit price for gas whatever their payment methods, as they do with electricity prices.

EDF Energy sells power to two major customer segments – residential customers and businesses, with the size of businesses ranging from large industrial businesses to small privately owned businesses. Sales to residential customers are described as the Business to Customer segment ("B2C") and sales to businesses is described as the Business to Business segment ("B2B"). EDF Energy adopts different risk management strategies for B2C and B2B.

Churn rates in the UK B2C market are consistently high. For example, at the end of September 2009, 14.7 million, or 55% of, UK B2C electricity customers and 12.3 million, or 57% of, UK B2C gas customers were no longer with their home supplier since the opening to competition of the electricity and gas sector (source: Department of Energy and Climate Change, Quarterly Energy Prices, December 2009).

As at the end of December 2009, EDF Energy had 4.1 million customers and 5.6 million customer accounts. It supplied 18.8 TWh of electricity to 3.4 million B2C accounts and 262,000 B2B SME accounts and 47.3 TWh of electricity to 182,000 B2B Major Business accounts. It also had 1.7 million B2C gas customer accounts and supplied 26.0 TWh of gas to these customers in 2009. While EDF Energy's B2C and B2B SME customers are primarily located in London, the South-East and the South-West of England, its B2B Major Business customers have sites throughout the country.

The number of EDF Energy B2C customer accounts has grown by around 1% over the period as a result of a slightly better churn rate and favourable pricing position compared to the market average.

## *6.3.1.1.2.3* Existing Nuclear business unit

### *Business overview*

EDF Energy owns eight nuclear power stations ("Existing Nuclear fleet") with a total capacity of 8.7 GW in the UK. The Existing Nuclear business unit of EDF Energy is largely represented by the nuclear generation business of British Energy which employs over 5,500 people. Eggborough coal station is managed separately under Hold Separate Arrangements (see section 6.3.1.1.2.6 ("Commitments under the European Commission Merger Regulation")).

### *Existing Nuclear fleet technology*

The Existing Nuclear business unit operates eight nuclear power stations in the UK. Seven of these power stations are Advanced Gas-Cooled Reactor ("AGR") power stations (Dungeness B, Hartlepool, Heysham 1, Heysham 2, Hinkley Point B, Hunterston B and Torness) and the eighth is a Pressurised Water Reactor ("PWR") power station (Sizewell B). In the year ended December 31, 2009 total output was 54.5 TWh.

An AGR differs in many respects from a PWR. Whereas the AGR design is unique to the UK, the PWR design is the most common reactor type in the world.

An AGR has a graphite moderator which helps to control the reaction. The reactor is encased in a steel-lined prestressed concrete pressure vessel several meters thick which also acts as a biological shield. The steam generator in which water is heated is situated inside the pressure vessel. An AGR uses enriched uranium for its fuel and $CO_2$ as coolant.

A PWR is contained inside a steel pressure vessel filled with pressurized water which acts as the coolant and moderator. The fuel used is enriched uranium dioxide and is contained in zirconium alloy tubes.

### *Regulation*

The operation of nuclear power stations is subject to extensive regulation in a number of areas, including regulation of nuclear safety and security (in particular, in relation to the construction, operation and decommissioning of nuclear installations and the protection of workers and the public against ionising radiations), regulation of the electricity market and environmental regulation.

### *Stations operating lives*

The potential lifetime of each of the power stations is determined primarily by the technical and economic practicability of supporting an agreed safety case for that power station in accordance with its nuclear site licence. Any decision by EDF Energy to extend the operating life of a power station beyond its current scheduled closure date would be based, in large part, on a combination of economic factors and the engineering judgments reached in respect of technical and safety issues. Lifetime extensions will require the consent of the Nuclear Decommissioning Authority ("NDA") if the extension will result in an increase in the Costs of Discharging Liabilities (as defined in the Nuclear Liabilities Funding Agreement, one of the agreements signed on the restructuring of British Energy).

The adequacy of the safety case for each power station is confirmed at each statutory outage for the following period by undertaking appropriate inspection, maintenance and testing of the plant and reviews of its operating performance. The results are reported to the Nuclear Installations Inspectorate ("NII"), which must give its formal consent under the nuclear site licence before the reactor concerned may be restarted. A reactor may only be operated following restart for the period determined by the safety case. This period is normally three years for all AGR power stations and eighteen months for the PWR power station. In addition, every ten years EDF Energy is required to undertake a Periodic Safety Review ("PSR") for each power station. PSRs also require NII acceptance in order to secure continued operation of a power station.

The current accounting lives and corresponding current scheduled closure dates of the power stations in the Existing Nuclear fleet are set out in the following table:

| Power Station | Start of Generation | Scheduled Closure Date | Accounting Lifetime | Life Extensions Already Declared by British Energy[1] | Scheduled Periodic Safety Review[2] |
|---|---|---|---|---|---|
| Hinkley Point B | Feb 1976 | 2016 | 40 years | 15 years | 2017 |
| Hunterston B | Feb 1976 | 2016 | 40 years | 15 years | 2017 |
| Dungeness B | Apr 1983 | 2018 | 35 years | 10 years | 2018 |
| Heysham 1 | Jul 1983 | 2014 | 30 years | 5 years | 2019 |
| Hartlepool | Aug 1983 | 2014 | 30 years | 5 years | 2019 |
| Torness | May 1988 | 2023 | 35 years | 10 years | 2020 |
| Heysham 2 | Jul 1988 | 2023 | 35 years | 10 years | 2020 |
| Sizewell B | Feb 1995 | 2035 | 40 years | – | 2015 |

*(1) Life extensions have already been approved by the relevant authorities and are already effective and included in the accounting lifetime.*

*(2) Expected date of response from NII.*

The most recent decision to extend accounting lifetimes was taken in December 2007 when, having completed the necessary technical and economic evaluation and received the relevant external consents, the decision was made to extend the accounting lives of Hinkley Point B and Hunterston B by five years to 2016. The decision extended the life of these stations for accounting purposes to 40 years. Further studies will be conducted by 2013 regarding the potential for additional life extensions of these stations beyond 2016.

Consideration of lifetime extensions for other stations will be completed a minimum of three years before the scheduled closure date of each station.

The regulator accepted the Periodic Safety Reviews for Heysham 2 and Torness on January 29, 2010, for the period up to 2020, subject to the normal delivery of the agreed work program.

### *Capacity and output*

The table below sets out the current capacity values and output of each of the power stations in the Existing Nuclear fleet for each of the last three financial years.

| Power Station | Capacity (MW)[1] | Output[2] (TWh) Year ended March 31 2008 | 2009 | Year ended December 31[4] 2009 |
|---|---|---|---|---|
| **AGR Power Stations** | | | | |
| Dungeness B | 1,040 | 6.4 | 2.9 | 4.0 |
| Hartlepool | 1,190 | 4.6 | 1.3 | 6.8 |
| Heysham 1 | 1,160 | 3.7 | 0.8 | 6.3 |
| Heysham 2 | 1,230 | 8.6 | 8.3 | 8.6 |
| Hinkley Point B | 860 | 5.3 | 5.2 | 4.9 |
| Hunterston B | 860 | 4.0 | 5.2 | 5.9 |
| Torness | 1,205 | 8.0 | 9.6 | 9.0 |
| **PWR power station** | | | | |
| Sizewell B | 1,188 | 9.8 | 9.6 | 9.0 |
| **TOTAL** | **8,733** | **50.3** | **42.9** | **54.5** |
| **LOAD FACTOR[3]** | | **65%** | **56%** | **72%** |

*(1) Capacities are stated net of all power consumed for the power stations' own use, including power imported from the Grid. Capacities are subject to review each year end. The capacities quoted reflect expectations for the reference energy generation from the units from January 1, 2010. In particular, Hinkley Point B and Hunterston B power stations have been adjusted to reflect planned operation at approximately 70% load, due to boiler temperature restrictions.*

*(2) Output in each year reflects any statutory, re-fuelling and unplanned outages. Numbers are rounded.*

*(3) Load factors are obtained by dividing the actual output by the output that would have been achieved had each power station operated at its stated capacity appropriate for the period.*

*(4) For the period from January 6, 2009 to December 31, 2009.*

### *Operational review of the Existing Nuclear fleet*

The Existing Nuclear fleet achieved an excellent operational performance in 2009. Output from the Existing Nuclear fleet for the financial period from January 6, 2009 to December 31, 2009 was 54.5 TWh, reflecting the successful return to service of the units at Hartlepool and Heysham 1 power stations in January, February and March 2009 following their extensive Boiler Closure Unit ("BCU") outages. The four units had been out of service since October 2007.

The total nuclear output for the period from January 1, 2009 to December 31, 2009, which was used to calculate the payment under the Guaranteed Contingent Value Rights ("CVR") made on January 29, 2010 (see note 5.1 to the consolidated financial statements as of December 31, 2009), was 55.1 TWh.

Output from the Existing Nuclear fleet for the year ended March 31, 2009 was 42.9 TWh, which was 7.4 TWh lower than nuclear output of 50.3 TWh for the year ended March 31, 2008. The reduction principally reflects lost output attributable to the BCU issue at Hartlepool and Heysham 1 power stations. Output was also impacted by issues with the fuel plug units at Dungeness B and the ongoing impact of operation at reduced load due to boiler issues at Hinkley Point B and Hunterston B (see the Plant Status section below for details on the status of each of these operational matters).

During the year ended December 31, 2009, one of the largest programs of outages for many years was carried out on the Existing Nuclear fleet. Statutory outages were completed at Sizewell B, Hinkley Point B reactor 3, Torness reactor 2, Hunterston B reactor 3 (including boiler inspections) and Hartlepool reactor 2. The statutory outage at Dungeness reactor 21 was also completed in 2009 but remains shut down for additional inspections (see "Dungeness Reactor 21" below). This program of outages reflects the continued focus on investment to improve the long-term reliability and safe operation of the Existing Nuclear fleet by proactively targeting investment designed to deliver equipment reliability and to reduce the risk of future losses.

### *Plant status*

#### *Dungeness fuel plug*

The length of re-fuelling outages at Dungeness B has been temporarily extended since September 2006 to address an issue with lack of weld penetration during original manufacture on fuel plug unit load path welds. A crimping machine to lock the fuel plugs in place has been developed and constructed and is now in service. However, a number of constraints remain on plug unit servicing.

Normal re-fuelling patterns had been expected to be achieved on both units by the end of the calendar year 2009. The return to normal re-fuelling patterns has been delayed until later in 2010 to allow further safety case development and plant modifications to be completed.

#### *Boilers*

Since the completion of boiler inspections and required repairs at Hinkley Point B and Hunterston B and the return to service of all four units during May 2007 and June 2007, Hinkley Point B and Hunterston B have been operating at reduced load to limit boiler tube temperatures.

During 2008, three of the four units were subject to planned boiler inspections and, where necessary, repairs. This allowed the three units to operate just above 70% load.

During 2009, work was successfully undertaken on the fourth unit (Hinkley Point B reactor 3) during the routine statutory outage to recover a number of boiler tubes and carry out re-orificing. All four units at Hinkley Point B and Hunterston B are now capable of operating at around 70% to 75%.

#### *Hot box dome*

Load was reduced on Heysham 1 reactor 2 to approximately 80% of full load in October 2006 to reduce the surface temperature on an area within the reactor, known as the Hot Box Dome. The degradation mechanism has the potential, if not resolved, to limit the output of the remaining reactors at Heysham 1 and Hartlepool below full load within three years. An established and dedicated team continues to work towards resolving the issue.

#### *Dungeness B Reactor 21*

During the 2009 statutory outage of Dungeness B reactor 21 a pressure vessel cooling water leak was identified on a pipe adjacent to a boiler reheater outlet penetration. The leak has been repaired. Before returning the reactor to service, the decision has been taken to confirm that there has been no damage to the penetration as a result of the leak. This involves inspection of pipe work external to the reactor. It is expected that the unit will return to service during the second quarter of 2010.

#### *Dungeness B Reactor 22*

Following a fire involving a small amount of oil in the Dungeness B reactor 22 boiler annexe, the unit was manually shutdown on November 24, 2009. Before returning the unit to service, replacement of cables and replacement or overhaul of mechanical equipment which was damaged was required. This replacement work has been completed and the unit was returned to service on February 18, 2010.

#### *Torness Reactor 1*

Torness reactor 1 tripped on February 1, 2010 following the failure of a generator transformer. The transformer has been replaced and the unit was returned to service on March 20, 2010.

### *Restructuring Agreements – costs relating to radioactive waste management and decommissioning*

Restructuring Agreements were originally entered into on January 14, 2005 (the "Restructuring Agreements") as part of the restructuring of British Energy carried out from 2002 under the aegis of the UK Government in order to stabilize the financial situation of British Energy. Under the terms of the Restructuring Agreements, in relation to British Energy's existing nuclear operations and subject to certain exceptions:

- the Nuclear Liabilities Fund ("NLF"), an independent trust set up by the UK Government as part of the restructuring of British Energy, agreed (at the direction of the Secretary of State) to fund, to the extent of its assets: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station); and (ii) qualifying costs of decommissioning in relation to British Energy's existing nuclear power stations;
- the Secretary of State agreed to fund: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station) and qualifying costs of decommissioning, in each case in relation to British Energy's existing nuclear power stations, to the extent that they exceed the assets of NLF; and (ii) subject to a cap of £2,185 million (in December 2002 monetary values, adjusted accordingly), qualifying contracted liabilities for British Energy's historic spent fuel (including in particular liabilities for management of AGR waste from spent fuel loaded prior to January 15, 2005); and
- British Energy is responsible for funding certain excluded or disqualified liabilities (mainly liabilities incurred in connection with an unsafe or careless operation of the power stations) and the potential associated obligations

of British Energy Limited and British Energy Generation Limited to the NLF and the Secretary of State are guaranteed by the principal members of British Energy.

British Energy has entered into a separate contract, now with the Nuclear Decommissioning Authority ("NDA") for management of AGR spent fuel loaded from January 15, 2005 and has no responsibility for this fuel after it is received at Sellafield.

The Secretary of State and EDF agreed (and, at the direction of the Secretary of State, NLF has consented) to limited amendments to the Restructuring Agreements in connection with the acquisition of British Energy by Lake Acquisitions. The amendments, among other things and subject to limited exceptions, restrict the majority of rights and obligations imposed by the Restructuring Agreements only to British Energy and its subsidiaries and subsidiary undertakings, and, accordingly, do not extend similar rights and obligations to EDF, or its subsidiaries and subsidiary undertakings. The amendments do not impact on the contractual funding commitments of the Secretary of State or NLF to British Energy.

Certain amendments have been made to the Restructuring Agreements, reflecting British Energy's access to an improved credit rating following the Acquisition. In particular, British Energy is required to maintain a minimum cash reserve. The amendments reduced the minimum level to £290 million. The cash reserve may be further reduced to nil provided irrevocable Committed Facilities of the same amount are put in place between a member of the EDF group, with an investment grade rating, and British Energy.

#### *6.3.1.1.2.4* Nuclear New Build business unit

The Nuclear New Build business unit is responsible for delivering EDF's program of new build in the UK.

##### *UK Government Energy Market Review*

The UK Government is committed to delivering the long-term target of an 80% reduction in $CO_2$ emissions by 2050. On July 15, 2009, the Government published The UK Low Carbon Transition Plan (the "Transition Plan"), setting out its route-map to a low-carbon economy by 2020. The Transition Plan estimates that by 2020 around 40% of the country's electricity will come from low carbon sources, such as renewables, nuclear and fossil fuel based generation fitted with carbon capture and storage. The plan reemphasises the need for such a diverse generation mix, in order to deliver energy security by reducing the reliance on any one type of technology or fuel.

The Transition Plan sets out steps that the Government is taking to remove barriers to bringing investment forward, and for nuclear, this involves the Office for Nuclear Development streamlining the planning and regulatory approvals processes for new nuclear power stations. This included running Strategic Siting Assessments ("SSA") with the aim of establishing which sites in England and Wales were potentially suitable for the deployment of new nuclear power stations by the end of 2025. The list of suitable sites identified through the SSA was published on November 9, 2009 in a draft National Policy Statement for nuclear power ("draft nuclear NPS").

The draft nuclear NPS was published alongside other technology-specific NPSs, which are all currently open for consultation. These NPSs, in conjunction with the Overarching National Policy Statement for Energy, provide the primary basis for decisions to be taken by the newly established Infrastructure Planning Commission ("IPC") on applications it receives for energy infrastructure. In accordance with the objectives of the Transition Plan, the draft nuclear NPS states that new nuclear capacity could contribute up to 25GW of the energy mix by 2025.

The draft nuclear NPS sets out its preliminary conclusion that of the sites nominated for consideration in the SSA, ten are potentially suitable for the deployment of new nuclear power stations by the end of 2025, and that all of them would be needed for the country to meet its low carbon objectives. Of the ten sites named, five belong to EDF Energy: Bradwell, Hartlepool, Heysham, Hinkley Point and Sizewell. Dungeness, which was also put forward for the SSA by EDF Energy, was not included.

##### *Nuclear New Build business unit activity*

EDF Energy has announced its intention to build four new EPR nuclear reactors in the UK with the first operational by the end of 2017. Subject to all conditions being met, a final investment decision by EDF for the first EPR is expected around 2011.

Following the Acquisition, EDF Energy has taken the opportunity to integrate the Nuclear New Build project teams from both businesses to leverage the significant knowledge and experience of those involved in delivering new nuclear capacity for the UK. The team now has in excess of 100 people with distinctive leadership, commercial and technical responsibilities.

The establishment of the Nuclear New Build business unit follows a significant period of planning, investment and consultation with the Government and communities local to the potential sites for nuclear new build regarding the possibility of building and operating up to four new EPR nuclear power stations.

Safety is a key focus of the EPR design. The EPR technology is already being employed at the new nuclear power station being constructed by EDF at Flamanville, in France. Using the same technology will enable the efficiencies that come with standardization of design in the construction and operation of a series of plants. In the second half of 2007, EDF Energy, with AREVA, initiated the licensing process. This process is scheduled to last for three and a half years. In addition to making progress with this, much of the focus for 2010 will be Generic Design Assessment ("GDA"), Nuclear Site License application and Independent Planning Committee planning and consent activities essential to the progress of the project.

EDF welcomes the November 2009 publication of the Step 3 report of the GDA of the EPR technology by the Health and Safety Executive ("HSE"). This marks the mid-way point in the project and indicates that the process is making good progress. The HSE has scheduled publication of its final conclusions on the EPR design in June 2011. According to the HSE's report, their work in Step 3 has further confirmed their confidence that the EPR can be suitable for construction on licensed sites in the UK. Furthermore, the report stated that the HSE are encouraged by the positive response of EDF and AREVA to the Control & Instrumentation regulatory issue raised during the process (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")) and that they anticipate that the proposals made by EDF and AREVA will be acceptable. As part of a transparent design assessment process in the UK, it was expected that issues would be identified and resolved prior to licensing and construction.

##### *Acquisition and divestment of nuclear land*

On May 7, 2009, EDF Energy announced plans to initiate a sales process relating to the divestment of land potentially suitable for nuclear new build. The process will result in EDF Energy selling part of one of its sites, at Dungeness in Kent or Heysham in Lancashire, independently from the conclusion of the draft nuclear NPS regarding the suitability of either one of them for the construction of a wave 1 nuclear plant. The sale will, however, allow EDF to deliver on a commitment it made to the European Commission as part of the Acquisition. The proposed sale is in line with the policy of

the UK Government to have more than one developer of new nuclear power plants in the UK. During the sale process, on May 8, 2009, EDF Energy invited credible nuclear operators to come forward with expressions of interest in the sites. The land which is eventually sold may only be purchased by a credible nuclear operator. The successful bidder will be provided with an option as to which site it wishes to purchase. The sale has been structured to minimise any effect on the operational power stations at Heysham and Dungeness which will continue to be operated by EDF Energy.

In addition, the NDA ran an auction process ending in May 2009 for the disposal of land at Wylfa, Oldbury and Bradwell. As a result of the NDA auction and in line with its commitment to the UK Government, EDF Energy has sold its site at Wylfa and has acquired land at Bradwell adjacent to the land already owned by it.

Finally, on November 27, 2009, EDF Energy announced the commencement of a sale process relating to its land at Bradwell. Any sale agreed will be conditional on the final results of the Government's Nuclear National Policy Statement (see section 6.3.1.1.2.4 ("Nuclear New Build business unit") ("UK Government Energy Market Review")) and on EDF Energy obtaining planning permission for two EPRs at its site at Sizewell.

#### *6.3.1.1.2.5* CCGT (Combined Cycle Gas Turbine)

EDF Energy has an objective to reduce the intensity of carbon dioxide emissions from its electricity production by 60% by 2020. In 2005, in order to assist towards this ambition, EDF Energy carried out an extensive review of its future energy generating requirements. This review confirmed the requirement for a 1,300 MW CCGT to commence generation by 2011 and was revalidated following the purchase of British Energy in early 2009.

As a result, EDF Energy is building a CCGT with a net capacity of 1,311 MW, comprising three 437 MW multi-shaft units, at West Burton in Nottinghamshire, adjacent to the existing coal fired power station. The West Burton B project was granted consent under Section 36 of the Electricity Act 1989 on October 30, 2007. The new plant is based on an EDF group design by EDF's thermal fleet engineering division, who is also acting as managing contractor on the site. It is planned that all three units will be fully commercially operational by mid 2011.

#### *6.3.1.1.2.6* Commitments under the European Commission Merger Regulation

The Acquisition was subject to certain conditions, including receiving Phase I Approval from the European Commission under the European Commission Merger Regulation ("ECMR"). On December 22, 2008, the European Commission announced its decision to approve the Acquisition, subject to certain commitments by EDF. Specifically, EDF has committed to the following: (i) to divest EDF Energy's gas-fired power station at Sutton Bridge; (ii) to divest British Energy's coal-fired power station at Eggborough; (iii) to sell minimum volumes of electricity in the UK wholesale market, ranging from 5 to 10 TWh per year during the period from 2012 to 2015; (iv) to divest, without conditions, one site potentially suitable for the construction and operation of new electricity generation facilities situated adjacent to existing British Energy stations at either Heysham or Dungeness, at the option of the potential purchaser; and (v) to give up one of the combined group's three grid connection agreements at Hinkley Point. The implementation of these commitments shall occur over the next few years, with the exception of (v) which has already been implemented.

As a consequence of (i) and (ii) above, Sutton Bridge and Eggborough are currently operating under ring fenced arrangements (the "Hold Separate Arrangements") under the management of hold separate managers.

- Sutton Bridge: located in Lincolnshire, Sutton Bridge is a CCGT power plant with a capacity of 803 MW. It was commissioned in May 1999 and the station was acquired by EDF Energy from Enron in April 2000; and
- Eggborough: located in Yorkshire, Eggborough is a coal-fired power plant with a capacity of 1,960 MW. The station was acquired by British Energy in 2000.

Both Sutton Bridge and Eggborough operate under Capacity and Tolling Agreements. In accordance with the Hold Separate Arrangements that have now been implemented, EDF Energy continues to benefit from the profits and cashflows associated with the output from Eggborough. As far as Sutton Bridge is concerned, as a consequence of the divestment commitment, EDF Energy had to put in place a Virtual Toll, by which EDF Energy sold the output of the plant and any associated benefit or liabilities to a third party Toller.

***Eggborough options***

Separate to EDF's commitment to the European Commission to sell Eggborough power station, but as part of the restructuring of British Energy in 2005, the holders ("the Eggborough Banks") of the debt which was loaned to British Energy to purchase Eggborough were provided with an option to acquire the station at a fixed price and have since then been able to sell this right to other third parties. The option was exercised by the option holders before its expiry date of August 31, 2009, and successfully completed on March 31, 2010 with the result of the transfer of ownership of Eggborough being effective on this date. Subject to final confirmation, the European Commission commitment referred to above will then be met.

#### *6.3.1.1.2.7* Pension schemes

EDF Energy sponsors four defined benefit pension schemes:

1. the EDF Energy Group ("EDFEG") of the Electricity Supply Pension Scheme ("ESPS") which was created in September 2005 as a result of the merger of the London Electricity and Seeboard groups of the ESPS. EDFEG is closed to new members;
2. the EDF Energy Pension Scheme ("EEPS") which was established in March 2004 and includes a number of legacy pension schemes from London Electricity and Seeboard. Membership of EEPS is open to all employees;
3. the British Energy Generation Group ("BEGG") of the ESPS for the majority of employees of British Energy; and
4. the British Energy Combined Group ("BECG") of the ESPS for the employees at Eggborough power station.

The schemes are part of the ESPS, which is a defined benefit scheme that is externally funded. Each pension group that participates in the ESPS is financially independent from the other groups. The following table sets out the position of each scheme:

| | EDFEG | EEPS | BEGG | BECG |
|---|---|---|---|---|
| Triennial valuation as at March 31, 2007 | (122) | (5) | (174) | (3) |
| Funding surplus / (deficit)[1] as at March 31, 2009 | (972)[5] | (77)[5] | (1,126)[5] | n/a[4] |
| Funding surplus / (deficit)[1] as at March 31, 2008 | (471) | (40) | (650) | (13) |
| Accounting surplus / (deficit)[2] as at December 31, 2009 | (794) | (52) | (736)[3] | (12)[3] |
| Accounting surplus / (deficit)[2] as at December 31, 2008[6] | (270) | 12 | (7)[3] | 2[3] |

*(1) As per annual funding statements issued to members by the Trustees in line with UK law.*

*(2) Funding position under International Accounting Standard 19 (2004) – Employee Benefits ("IAS 19").*

*(3) Total deficit reported in British Energy's financial statements for its financial years ended March 31, 2008 and 2009 were £216 million and £559 million respectively.*

*(4) The BECG triennial valuation has been brought forward from March 31, 2010 to March 31, 2009 to facilitate the sale of Eggborough power station and discussions are ongoing on the deficit level as at March 31, 2009.*

*(5) The most recent deficits based on a roll forward of the 2007 triennial valuation are £839 million for EDFEG as at December 1, 2009, £70 million for EEPS as at December 31, 2009 and £844 million for BEGG as at February 8, 2010.*

*(6) BEGG and BECG stated as at January 6, 2009.*

To address the deficits in EDFEG and EEPS which were identified during the triennial valuation as at March 31, 2007, EDF Energy has agreed a deficit repair plan with the Trustees in which it will make additional payments over the period April 1, 2008 to March 31, 2015. The funding is subject to periodic review by the Trustees and EDF Energy.

The pension deficit repair plan for the EDFEG comprises payments of £32 million per annum in monthly installments, for the period April 1, 2008 to March 31, 2010, followed by payments of £6 million per annum in monthly installments, for the period April 1, 2010 to March 31, 2015.

Additional contributions of £460,000 per month were paid into the EEPS between April 1, 2008 and March 31, 2009 in order to fully repay the deficit identified in 2007.

Following the Acquisition, EDF Energy and the Trustees of BEGG and BECG agreed a pension deficit plan until December 31, 2013 for BEGG and March 31, 2010 for BECG, both effective from April 1, 2009. This plan is based on the pension deficits as at March 31, 2007 and replaces the deficit repair plan implemented at the time of the 2007 triennial valuation.

The pension deficit repair plan agreed after the Acquisition for BEGG and dated March 18, 2009 comprises contributions of £112 million per annum paid in monthly installments throughout the year ending March 31, 2010, followed by contributions of £12 million per annum paid in monthly installments from April 1, 2010 to December 31, 2013. In November 2009 it was subsequently agreed by the Trustees that funding levels would remain at the current level of £112 million per annum for the period from April 1, 2010 to March 31, 2011 until the finalization of the next triennial valuation, due as at March 31, 2010. Contributions from April 1, 2011 onwards will either be £12 million per annum or such other amount as agreed as part of the 2010 triennial valuation.

Also part of the Acquisition, and in order to facilitate the sale of Eggborough power station (see section 6.3.1.1.2.6 ("Commitments under the European Commission Merger Regulation")), EDF Energy and the Trustees of BECG have agreed to bring forward the next triennial valuation for BECG from March 31, 2010 to March 31, 2009. The 2009 BECG valuation is currently being finalized.

Should the proposed sale of the UK Networks businesses take place this will impact two of the four pension schemes, namely EDFEG and EEPS. Discussions have been ongoing for some time with the Trustees of both EDFEG and EEPS about the pension implications of a potential sale. If a sale does take place both pension schemes would need to be split, with two new pension schemes having to be established in order that those pension liabilities attributable to the Networks businesses transfer to the new owner. At this point in time the discussions with the Trustees are ongoing.

### 6.3.1.1.3 LONDON 2012 OLYMPIC GAMES

EDF is the Official Energy Utility Services Partner as well as a Sustainability Partner. It was the first Sustainability Partner and the second (after Lloyds TSB) tier one official partner to be announced. At the end of 2009 there were seven tier one official partners including Lloyds TSB, Adidas, BT Group plc., BP plc., British Airways and BMW. There were also six tier two "official supporters" and twelve tier three "official providers & official suppliers".

Under this partnership EDF Energy will supply energy from renewable sources for the London 2012 Olympic Games. EDF Energy will also provide a low carbon fuel for the Olympic cauldron. Sustainability will continue to be a central theme in the activation of the partnership.

## 6.3.1.2 GERMANY – EnBW

EnBW ranks third among German energy companies after E.ON and RWE and before Vattenfall Europe in terms of sales and number of customers. Furthermore, it is the top electricity company in its historical development area, Baden-Wurtemberg. Its electricity business includes generation, transmission, distribution, supply and trading. EnBW also operates in the gas segment (midstream: import agreements, infrastructure, gas storage, trading/portfolio management – downstream: transmission, distribution and sales) and provides energy-related services. EnBW holds equity participations in several local utilities in Baden-Wurtemberg. Elsewhere in Germany, EnBW also holds interests in local utilities and has developed, on a national scale, an independent electricity retailer, Yello, the electricity supplier in Germany which has the highest number of customers outside its historical area. In 2009, the EnBW group recorded sales of €15.564 billion and EBITDA of €2.748 billion (source: EnBW 2009 annual report). EnBW was consolidated by proportional integration at 46.07% in the consolidated financial statements of the EDF group as of December 31, 2009.

EnBW, whose shares are traded on the Frankfurt stock exchange and the Stuttgart Stock Exchange, publishes certain information (including its annual report) available on its website at www.enbw.com.

Concerning the evolution of market prices and demand in Germany, see section 9.2.1. ("Economic environment").

### 6.3.1.2.1 STRATEGIC INTEREST OF EDF'S STAKE IN ENBW

EDF's stake in EnBW followed a long collaboration between the two companies, especially in the technical field and that of electricity exchanges with Baden-Württemberg. EnBW has a strong presence in this region, which is also one of the most developed in Europe, with a population of 11 million and dynamic companies focused on exports.

EnBW's Yello brand gives the company a strong marketing advantage with its residential and small business customer base, which has been opened to competition since 1998, and an expertise which EDF may use to its advantage. EDF's holding in EnBW also allows it to service major multisite customers of both companies.

EnBW's equity holdings in the "Stadtwerke" (see section 6.3.1.2.3.1 ("Electricity businesses")) in Baden-Wurtemberg, as well as in Düsseldorf and in Saxony in eastern Germany allow it to operate outside of its historical area.

As well, EnBW's gas business, with sales of €2.453 billion (source: EnBW 2009 annual report) in one of the leading gas markets in Europe, is a major advantage for the EDF group's gas strategy.

Moreover, EDF estimates that a presence in Germany, the largest market in Europe in terms of numbers of customers and electricity consumed, is essential from the perspective of a European energy market.

The EDF group's strategic interest in Germany is also based on the size of the "German Marketplace" encompassing Germany, Austria and, to a certain extent, Switzerland, which gives access to almost 90 million consumers. This "German Marketplace" may be considered a single market as interconnections between the countries concerned are highly developed and transmission lines are not saturated, which leads to flexibility in exchanges. Wholesale prices for different products (base-load, peak-load and forward spot markets) are also globally the same in the three countries. This network occupies a key position in Europe and is likely in the medium term to create, with France and the Benelux countries, a "Regional Market", if network congestion is alleviated.

The interest of a presence in Germany is reinforced by growth opportunities in the countries of central and eastern Europe since the enlargement of the European Union. EnBW is present in the capital of electricity generation and distribution companies, located in the Czech Republic, in Prague, where EnBW has a participation in Prazska energetika a.s. or through minority shareholdings in Switzerland, Austria, Poland and Hungary. EnBW intends to develop in Turkey, where it has entered into a strategic partnership and created a joint venture with Borusan (see section 6.3.1.2.3.4 ("Development Areas").

Finally, the geographical proximity of EDF and EnBW and the similarity of the sectors in which they operate (especially the large proportion of nuclear energy generated by the two companies) enable the sharing of expertise and the realization of synergies.

### 6.3.1.2.2 DETAIL OF EDF'S HOLDING IN ENBW

#### EnBW shareholders

As of the date of the filing of this *Document de Référence*, EDF held 45.01% of EnBW's share capital and, excluding treasury shares that have no voting rights, 46.07% of EnBW's voting rights. With EDF, the other main EnBW shareholder is OEW, a group of local authorities in Baden-Wurtemberg, which held, like EDF, 45.01% of EnBW's share capital and 46.07% of EnBW's voting rights as of the date of the filing of this *Document de Référence*. EDF and OEW entered into a shareholders' agreement that gives them joint control of the company (see below).

As of the date of the filing of this *Document de Référence*, the remaining balance of EnBW's share capital is held as follows: 5.84% by different municipalities and municipality federations in Baden-Wurtemberg, 1.84% by the general public and 2.30% as treasury stock by EnBW (source: EnBW 2009 annual report).

#### Shareholders' agreement

EDF and OEW entered into a shareholders' agreement on July 26, 2000, under the terms of which they agreed to hold, jointly and in parity, the majority of EnBW's share capital and to control the company jointly. The agreement provides that EnBW must be EDF's exclusive vehicle in Germany for any investment relating to the electricity, gas and waste businesses, unless OEW or EnBW declines the proposed investment. Furthermore, the agreement distinguishes between two categories of shares:

- shares subject to the shareholders' agreement, which represent 50.01% of EnBW's share capital (25.005% for each party) (the "Shares subject to the Shareholder's Agreement"); and
- shares not subject to the shareholders' agreement, which represent the balance of the holdings of each party.

With regard to Shares subject to the Shareholder's Agreement, the agreement provides that since January 1, 2005 and until December 31, 2011, OEW is required to obtain EDF's prior agreement to sell its Shares subject to the Shareholder's Agreement to a third party that is not part of OEW.

However, OEW has:

- a put option against EDF for some or all of its Shares subject to the Shareholder's Agreement (25.005%), which may be exercised at any time between January 1, 2005 and December 31, 2011 at a price of €37.14 per share. The EDF group has recorded an amount of € 2,322 million in its off-balance sheet commitments at December 31, 2009 (see note 27.5 to the consolidated financial statements as of December 31, 2009);
- a preemption right on Shares subject to the Shareholder's Agreement held by EDF; and
- the right to oppose a sale by EDF of its Shares subject to the Shareholder's Agreement if the third party buyer is not ready to purchase OEW's shares at the same price (tag-along clause).

Regarding shares which are not subject to the Shareholder's Agreement, the agreement provides for a reciprocal preemption right mechanism.

EDF and OEW are required to uniformly exercise their voting rights at Shareholders' Meetings and to adopt a uniform position on decisions examined by the Supervisory Board and are also required to adopt a common position on any decision concerning EnBW that is considered important by at least one party and to uphold it in respect of the company.

To this end, EDF and OEW have formed, in accordance with the stipulations of the shareholders' agreement, a shareholders' Committee (led by EDF) allowing them to adopt common positions. However, EDF has a decisive vote for decisions relating to the implementation of the EnBW's medium term development plan (*"plan de développement à moyen terme"*) as drawn up by the parties.

Out of the 20 members on the Supervisory Board, EDF has four representatives and OEW has three (including the Chairman, who has the decisive vote).

Two members were appointed by the Shareholders' Meeting of EnBW (one suggested by OEW and the other by EDF), ten members were appointed by EnBW's employees and the remaining member is appointed jointly by EDF and OEW.

One of the members of EnBW's Executive Board, currently composed of five members, is appointed by EDF.

The agreement's earliest expiry date is December 31, 2011, but the agreement will remain in force for as long as EDF and OEW own jointly, the majority of the share capital; and individually, at least 17% of the share capital.

**Other shareholders' agreements**

OEW had a put option against EDF for some or all of the shares it purchased from Deutsche Bank and HSBC Trinkhaus & Burkhardt KgaA on January 28, 2005 (5.94% of EnBW's share capital). This option was exercisable at any time from January 28, 2005 to November 30, 2006, but was not exercised by OEW. Since December 1, 2006 until December 31, 2011, in the event that OEW sells the aforementioned shares to a third party, EDF will have a right of preemption.

**Evolution of EnBW shareholding**

For EDF, an ongoing quality partnership with OEW is a major objective. On the occasion of its return to parity with EDF in the capital of EnBW in April 2005, OEW expressed its objective of holding its shares until at least 2011. However, this situation could change before 2011 as OEW may exercise its sale option relating to Shares subject to the Shareholders' Agreement before this date.

### 6.3.1.2.3 DETAIL OF ENBW'S BUSINESS

In 2009, sales of electricity by the EnBW group (including the net volume traded and all holdings) amounted to 119.7 TWh. The electricity consumption in Germany amounted 519 TWh[1]. In 2009, sales of gas by the EnBW group amounted to 65.8 TWh[1], and the German gas consumption amounted to 890 TWh in 2009.

The table below sets forth key figures for the EnBW group for the last two financial years (source: EnBW 2009 Annual Report):

| | Financial Year as of | |
|---|---|---|
| | **12.31.2009** | 12.31.2008 |
| **Sales (€ billions)(1)** | **15.56** | 16.31 |
| Of which electricity | 12.39 | 12.74 |
| Of which gas | 2.45 | 2.88 |
| Electricity sales (TWh)(2) | 119.7 | 130.5 |
| Gas sales (TWh) | 65.8 | 69.8 |
| Energy customers (millions) | 6 | 6 |
| Employees | 21,124 | 20,501 |

*(1) Net sales, after deduction of taxes on electricity and gas.*

*(2) Includes sales of electricity by companies where EnBW has (i) fully consolidated majority holdings for which the volume of sales is taken into account at 100%, and (ii) proportionally consolidated minority holdings for which the volume of sales is taken into account according to the percentage of the stake and the electricity volume traded.*

#### *6.3.1.2.3.1* Electricity businesses

***Generation***

In 2009, EnBW's own production (i.e. production from EnBW's power plants), with the exception of purchase electricity agreements (10.2 TWh) and participation in power plants (4.0 TWh), was 52.4 TWh.

In 2009, sales of electricity by the EnBW group (including the net volumes traded and all holdings) amounted 119.7 TWh. EnBW has an installed generation capacity of 15,771 MW. It is broken down as follows:

| *MW** | Capacities |
|---|---|
| Nuclear (including EDF contracts and E.ON) | 4,846 |
| Classical Fossil-fired | 7,240 |
| Hydropower | 3,510 |
| Other renewable energies | 175 |
| **TOTAL** | **15,771** |

** Gross data, EnBW group consolidated figures including participations (Source: EnBW 2009 annual report).*

1 Source: *Bundesverband der Energie- und Wasserwirtschaft (BDEW).*

EnBW's generation assets in Germany are mainly located in Baden-Wurtemberg. They are characterized by their well balanced and relatively low carbon dioxide emissions generation mix, compared to other energy producers in Germany. Baseload generation is provided by nuclear power and hydropower, mid-merit generation is provided by coal-fired power plants and peak-load generation is provided by gas-and oil-fired power plants, as well as pumping stations. Overall, fossil-fired and hydropower means intended to meet peak demand are adequate, even allowing peak energy to be sold on the market.

The following table sets forth electricity generation, of a total of 66.7 TWh, by type of primary energy used, obtained on the basis of the EnBW group's consolidated data, including subsidiaries:

| | |
|---|---|
| Coal, gas, oil | 27.6% |
| Nuclear energy | 57.2% |
| Hydropower and other renewable energies* | 10.6% |
| Others** | 4.6% |

* *According to paragraph 42 of the German law of July 7, 2005 concerning electricity and gas.*

** *Undetermined energy source, most of this volume being provided by trading.*

*(Source: EnBW 2009 Annual Report).*

Through its own generation, long-term supply contracts and its holdings in power plants, EnBW satisfies 56% of the EnBW group's requirements, i.e., 66.7 TWh out of 119.7 TWh sold in 2009.

### *Investments in production capacity*

EnBW has invested in the renewal and the improvement of its capacity to produce electricity. EnBW's objective is to achieve a share of 20% for renewable energies in its generation mix by 2020.

#### *Investments in fossil-fired generation capacity*

In December 2006, EnBW thus decided to go ahead with the construction of a highly efficient coal-fired power plant with an gross installed capacity exceeding 900 MW in Karlsruhe, the expected output of which exceeds 46%. The investment is greater than €1 billion. Work commenced at the beginning of 2008 with commissioning planned for the end of 2012.

EnBW contributes to the 900 MW highly efficient coal-fired power plant project for the company Grosskraftwerk Mannheim AG, 32%-owned by EnBW. The study for the construction of a gas-fired power plant at Karlsruhe is ongoing. EnBW also entered into a supply agreement for a 20-year period with the EVONIK generator (located in the Ruhr region), which, as from 2010, will give to EnBW drawing rights to 250 MW.

EnBW's fossil-fired generation capacity was strengthened until the beginning of 2010 by 1,099 MW:

- in May 2009, EnBW acquired E.ON's participation in the brown coal-fired power plant at Lippendorf, which represents access to a capacity of 446 MW, and the coal-fired power plant at Bexbach (79 MW).
- under agreements between EDF, E.ON and EnBW signed in September 2009 and completed in January 2010, regarding swaps of electricity drawing rights and generation assets, EnBW acquired 50.4% in the coal-fired power plant at Rostock (i.e. 256 MW) and obtained a drawing right with a capacity of 159 MW on E.ON's brown coal power plant in Buschhaus in Germany.

With effect on October 1, 2009, EnBW acquired an additional 16.7% in the power plant at Bexbach (i.e. 159 MW) from STAWAG.

#### *Investments in hydropower generation capacity*

Extension projects for hydropower sites are in progress or in study:

- extension of the Rheinfelden hydropower plant which should be commissioned in 2010 (increase in capacity from 26 MW to 100 MW);
- addition of a fifth turbine with a capacity of 38 MW at the Iffezheim power plant. The first stone was laid on July 2009 and the plant should be commissioned in 2012 (under the direction of EnBW and with the participation of EDF);
- study of the addition of a fifth turbine with a capacity of 28 MW at the Gambsheim power plant, work on which could commence in 2010 (under the direction of EDF and with the participation of EnBW).

Acquisitions of wind farms under construction have been made in Germany:

- in May 2008, EnBW acquired two project development companies (EOS Offshore AG and Offshore Ostsee Wind AG), which hold the rights to offshore wind energy projects in the Baltic Sea and the North Sea for a total of 1,200 MW. An initial project in the Baltic Sea of approximately 50 MW was launched at the end of 2008, which should be commissioned at the end of 2010.
- in February 2009, EnBW acquired 3 onshore wind farms with a total power of 52 MW from the development company Plambeck Neue Energien AG, which were commissioned in the first half of 2009;
- in December 2009, EnBW acquired 7 onshore wind farms with a total power of 53 MW from the development company Plambeck Neue Energien AG, to be commissioned in mid 2010.

### *Nuclear capacity*

Nuclear power represents 31% of EnBW's installed capacity (which includes power supplied by EDF under energy supply contracts). If the expected exit from nuclear power were to occur, this would force EnBW to replace approximately 4,000 MW of installed capacity by 2022, without taking into account drawing rights of 800 MW obtained in 2009 from E.ON.

The nuclear power station at Obrigheim (net capacity of 340 MW) was shut down in May 2005 and its decommissioning commenced in October 2008.

The schedule for closing EnBW's nuclear power plants as of the date hereof is set forth in the table below:

| Nuclear Plant | Installed Capacity Commissioning | Installed Capacity (MW) | Forecast Closure |
|---|---|---|---|
| Neckarwestheim 1 | 1976 | 633* | 2010** |
| Philippsburg 1 | 1980 | 890 | 2012 |
| Philippsburg 2 | 1985 | 1,392 | 2018 |
| Neckarwestheim 2 | 1989 | 1,096* | 2022** |

* *Corresponds to the EnBW quota in the power plant.*

** *This calendar does not take into account the prolongation of the operating life of unit 1 at the Neckarwestheim power plant requested by EnBW at the end of 2006.*

In the context of changed political landscape after the elections in September 2009, a prolongation of nuclear power usage seems possible. A political decision on this topic is expected in 2010.

Independent from that EnBW filed an official request for authorization to transfer production volumes from unit 2 to unit 1 of the Neckarwestheim power plant at the end of 2006. In June 2008, EnBW's request to extend the operation of unit 1 until 2017 was rejected by the German Minister for the Environment. EnBW has appealed against this decision before the Administrative Court of Mannheim.

Future costs for the elimination of irradiated fuel and operational waste as well as the shutdown and decommissioning of nuclear power plants are estimated by EnBW to represent €5,181 million on a basis updated at a nominal rate of 5.5%, integrated into EnBW's accounts as at December 31, 2009. The calculation of these provisions is based on regulatory obligations and the measures of the operating authorizations.

Under agreements executed in December 2009 between EDF, E.ON and EnBW, EnBW acquired drawing rights for 800 MW of nuclear energy in Germany from E.ON's nuclear portfolio and E.ON acquired a drawing right for 800 MW of nuclear power from historical drawing rights of EnBW on EDF's nuclear generation.

### *Supply*

In 2009, EnBW sold 119.7 TWh of electricity (including trading business and participations) to approximately 6 million customers ultimately (source: EnBW 2009 Annual Report).

The EnBW group markets electricity through its subsidiaries EnBW Vertriebs- und Servicegesellschaft GmbH, wholly-owned, EnBW Ostwürttemberg Donau-Ries AG, 99.73% -owned and Energiedienst Holding AG, a 81.72% -owned subsidiary, operating in Baden-Wurtemberg and Switzerland (source: EnBW 2009 annual report). EnBW also markets electricity through several majority holdings, including ENSO (Energie Sachsen Ost AG), in Land Sachsen (50.10% -owned) and Stadtwerke Düsseldorf in North Rhine Westphalie (54.95% -owned).

EnBW owns a 15.07% stake in MVV (MVV Energie AG), which is a major electricity supplier in the Mannheim region. EnBW has no significant influence on the company (EnBW is not represented on its Supervisory Board). MVV is not a direct or indirect supply channel for EnBW.

Outside Baden-Wurtemberg, supply to residential and small business customers are mainly provided by the company Yello Strom GmbH. Yello has over 1.4 million customers throughout the German market (source: Yello website).

In 2009, the competition on the German electricity market increased: on the B2C (business to consumer) market, the churn (cumulated rate of change of supplier since 1998) increased from 18.9% in December 2008 to 20.5% in September 2009 (source: Bundesverband der Energie-und Wasserwirtschaft).

In order to face this competition, EnBW is engaged in a multi-brand approach: on the B2C market with the EnBW and Yello brands, together with Naturenergie (the domestic supply brand for the energy produced from renewable energies). On the B2B market, EnBW is active with the EnBW and Watt (subsidiary specialized in the intermediary and small accounts without Baden-Wurtemberg) brands.

Moreover, EnBW pursue its strategy to propose different services in order to retain and gain new clients. In this context, EnBW and Yello launched a pilot project of intelligent meters on the B2C market allowing to follow the consumption of electricity on Internet and opening prospects of new product and service development. All marketers of the EnBW group offer its customers the intelligent meter.

On July 1, 2009, EnBW increased its baseload electricity tariff "EnBW Komfort" and its special tariffs for new customers by 7.5%. This increase was effective as of January 1, 2010 for existing special tariffs customers.

### *Transmission – distribution*

EnBW manages one of the four balance areas in Germany and is thus the only electricity transmission system operator in Baden-Wurtemberg. In its area, EnBW is responsible for providing stability and managing the very high voltage transmission network, in addition to interconnections with other networks.

EnBW owns the majority of the high and medium voltage network in its historical area and is also very active in distribution. EnBW has eight regional centers that operate distribution networks in Baden-Württemberg under concession agreements. EnBW has entered into more than 1,000 concession agreements, including approximately 750 agreements directly with municipalities, with the balance entered into indirectly through subsidiaries or holdings.

EnBW also holds approximately 50 stakes in Stadtwerke and municipal corporations that operate distribution networks, which means it can operate in areas where it has no direct distribution concessions.

As of the date of the filing of the present *Document de Référence*, EnBW holds a 54.95% stake in the share capital of the Düsseldorf Stadtwerke AG, ("SWD"). In December 2005, the city of Düsseldorf's exercise of one put option granted by EnBW on a 25.05% stake in the share capital of SWD, allowed EnBW to take control of SWD in March 2006, after the European Commission consented to this acquisition. Until December 31, 2009, the city of Düsseldorf also held a second put option on EnBW, also applying to 25.05% of SWD's share capital. EnBW, which could extend these exercise periods by one-year periods, decided in October 2009 not to extend it.

In 2008, SWD acquired 49.9% of Stadtwerke Hilden and concluded a partnership with the latter in order to optimize their purchases of energy and materials.

The table below illustrates the size of the EnBW network:

Length of the EnBW group network
*(km)*

| | |
|---|---|
| **Very high voltage:** | |
| 380 kV | 1,999 |
| 220 kV | 1,829 |
| **High voltage:** | |
| 110 kV | 9,813 |
| **Medium voltage:** | |
| 30, 20 and 10 kV | 48,560 |
| **Low voltage:** | |
| 0.4 kV | 103,728 |

*(Source: EnBW 2009 Annual Report).*

Like German distribution networks in general, the EnBW distribution network is characterized by a level of quality of service that is among the best in Europe.

### *The transmission network*

In order to ensure the performance of the European internal energy market, EnBW Transportnetze AG (EnBW TNG) participates in:

- a joint company with Swissgrid AG (CESOC – Central European System Operation Coordinator AG) for the coordination of the transmission networks, in order to ensure the safety of the network ;
- a joint cross-border services company with other transmission system operators for the Central West-European Electricity market, RTE-EDF Transport, Elia, TenneT, E.ON Netz, RWE TSO and Cegedel Net, CASC-CWE (Capacity Allocation Service Company), the objective of which is to implement services of power transmission capacity on the common borders between the five countries, based on standardized systems and rules.

### *The distribution networks*

The distribution networks belong to EnBW for the duration of the concessions. The networks granted under a concession are accounted for as tangible assets in EnBW's balance sheet. Concessions held by utility companies in which EnBW has a minority stake are shown on the balance sheet ("Assets") of such utility company. Where EnBW has a majority stake, this concession appears in the EnBW group accounts.

Many of the concession agreements entered into by EnBW must be renewed before 2013. The company has prepared itself for these deadlines and several years ago drew up a structured actions plan consisting of various measures: situation analysis by municipality, definition with the associations of the municipalities of Baden-Wurtemberg of a standard contract for concessions, allocation of special investment budget for concessions, etc. Thus, in 2009, EnBW renewed 192 contracts of concessions concerning distribution networks of electricity.

The non-renewal of a concession does not necessarily mean that EnBW ceases to operate in the municipality concerned. Indeed, a municipality that does not renew its concession may create a Stadtwerke and allow EnBW to participate in its share capital, which would allow EnBW to continue to secure the related area. If a concession is lost, EnBW must sell the network to its competitors or to Stadtwerke at market price ("Sachzeitwert"). If the non-renewed concession is granted to a competitor, EnBW does not necessarily lose its customers as they have sales contracts with EnBW. However, the "New" network operator will have a strong interest in acquiring these customers.

EnBW aims to increase its presence in the distribution business outside Baden-Wurtemberg by purchasing stakes in regional utility companies.

### *Network access tariffs and regulation*

In September 2007, Germany decided to pass from a control of the network access charges cost based to the incentive regulation of the electricity and gas networks from January 1, 2009. The regulation Anreizregulierungsverordnung (ARegV) of October 29, 2007 schedules, for the electricity two periods of 5-year control (2009-2013 and 2014-2018) and, for the gas, a first period of 4 years, then a second of 5 years (2009-2012 and 2013-2017).

In July 2008, the German regulator (the Bundesnetzagentur – BNetzA) made a decision with respect to the network assets returns rate, which for the first incentive regulation period, for both electricity and gas, will be 9.29% for installations completed since 2006 and 7.56% for installations built until 2005.

For 2009, the managers of the gas networks are authorized to increase their transportation tariffs by 2% compared with 2008. The majority of electricity distribution network managers have been authorized to increase their transmission tariffs by between 3% and 4% and the manager of the Baden-Wurtemberg transmission network (EnBW TNG) may have increased them by 13%.

### *Trading activity*

EnBW Trading GmbH is a wholly-owned subsidiary of EnBW, responsible for managing the upstream-downstream balance, i.e., the balance between different means of sourcing (including its own generation capacity) and demand for electricity. It is responsible for managing generation capacity, fuel purchases and the management of associated risks, as well as EnBW's supply contracts. It also deals with $CO_2$ quota transactions and trades on its own account.

EnBW Trading operates on the various European wholesale markets and energy stock markets.

### *6.3.1.2.3.2* Gas business

At the end of 2009, EnBW had approximately 516,000 gas customers. In 2009, EnBW sold 65.8 TWh of gas and recorded sales of € 2.45 billion (source: EnBW 2009 Annual Report).

In the gas segment, EnBW operates at all stages along the value added chain in the midstream and downstream areas. The midstream business includes import agreements, infrastructure, gas storage and trading/portfolio management. Downstream covers gas transmission, distribution and sales.

The core companies in the EnBW Group operating in gas business are the following:

**EnBW Gas Midstream GmbH** employs import agreements and investments in the necessary infrastructure to safeguard EnBW's access to gas in the medium to long term. In light of this, investments in LNG import terminals in north-western Europe, for example in Rotterdam, and the underground storage of gas are under review. The gas storage project in Etzel continues to make progress. EnBW had secured long-term rights to use salt caverns in the Etzel region in 2007. In order to exploit synergies, EnBW and EDF, which also controls storage caverns in the Etzel region, have formed a 50/50

joint venture at the end of 2008. The joint venture is tasked with the construction and commercial operation of the aboveground facility from 2011 onwards. Construction work on the facility is on schedule. The storage facilities will be connected to the high-pressure grid via the 56 km pipeline in which EnBW and EDF both have a stake. It is scheduled to be completed by the end of 2010 and it will allow effective capacity of 0.4 $Gm^3$ (see section 6.4.2 ("Natural gas businesses")).

The core responsibilities of **GasVersorgung Süddeutschland GmbH** (GVS) include the purchasing, sale, storage and transmission of gas. This sales company supplies natural gas to municipal utilities, regional gas suppliers, industrial customers and power stations both in Germany and abroad. Its range of services is rounded off by consulting activities, gas industry, technology and telecommunications services. The shareholders of GVS are, in parity, EnBW and the Italian energy group Eni. At the end of 2009, GVS' high-pressure grid had a total length of some 1,900 km in Baden-Wurtemberg. The network operator function is performed by a wholly-owned subsidiary of GVS, GVS Netz GmbH. Until September 2009, GVS Netz offered its customers a full range of gas transmission services in its own market territory in collaboration with Eni Gas Transport Deutschland. On 1 October 2009, this market territory became part of the extended market territory NetConnect Germany.

**EnBW Gas GmbH** focuses on gas supplies to end customers in Baden-Wurtemberg and operates its own storage facilities. The network operator function is performed by a wholly-owned subsidiary, EnBW Gasnetz GmbH. The high, medium and low pressure grids have a total length of some 4,500 km.

The supply territories of the downstream gas distribution companies within EnBW include, in Baden-Württemberg, Stuttgart region, the Black Forest, the Swabian Alb, Lake Constance, North Baden and East Wurtemberg, among others. Through its equity investments in Stadtwerke Düsseldorf and ENSO Energie Sachsen Ost AG, EnBW also has gas distribution activities in the Düsseldorf region and Saxony. Yello Strom GmbH has launched a pilot project to sell natural gas to retail customers in Essen and Nuremberg.

#### *6.3.1.2.3.3* Energy and environmental services

Energy and environmental services include waste elimination businesses, water distribution and energy-related services for industry. EnBW's total consolidated sales in 2009 in these areas were € 722.3 million (source: EnBW 2009 Annual Report).

In December 2008, EnBW Energy Solutions GmbH ("ESG") signed a contract with the papermaker Progroup established in Eisenhüttenstadt (Brandenburg) for the construction of a cogeneration power plant, which will supply 150 MW of heat, 30 MW of electricity and approximately 1 million tonnes of steam from May 2011.

EnBW supplies energy-related services to companies through its wholly-owned subsidiary ESG. ESG brings together all of EnBW's expertise in terms of energy and engineering services for industrial customers.

#### *6.3.1.2.3.4* Development areas

Following the completion in 2006 of the cost reduction program named "Top Fit", EnBW embarked on a new 3-year program called *Impuls – gemeinsam besser*, aiming at improving EnBW's performance in all areas.

After a trial period in 2007, the *Impuls – gemeinsam besser* program continued in 2009 and will be pursued over the coming years. This program intends to optimize continuously the operational processes by a strong involvement of the operators, but also to realize quick earnings on a short term basis.

While maintaining its objective of financial discipline over the coming years, EnBW's ambition is to consolidate and develop its position as the third German energy group with a strong regional base. To this effect, EnBW's management has stated that priority would be given to strengthening its positions in Baden-Wurtemberg and expanding in Germany. EnBW also wishes to strengthen its position in Central and Eastern Europe.

EnBW intends to expand the investments in the gas business. In particular, EnBW is reinforcing the activities in the midstream area to enable EnBW to exploit business opportunities arising from the growth in cross-border transmission and the increasing liquidity of the gas markets. EnBW will employ its expertise in the field of electricity trading and its knowledge of the market to make optimum use of its assets. To this end, EnBW is working to enhance its asset portfolio of procurement agreements, transmission capacities (pipelines and LNG) and storage facilities. The Etzel storage project jointly under construction with EDF is an important milestone in this respect. The acquisition of the shareholding in EWE Aktiengesellschaft similarly makes it possible to jointly exploit opportunities in the future.

In July 2009, EnBW completed the acquisition of 26% of the share capital in EWE AG, one of the largest German energy companies, for a total of approximately €2 billion. EWE is an energy provider and distributor based in Lower Saxony, sales for the 2008 financial year of which were €5.3 billion and EBITDA €741.1 million. EWE itself owns a gas storage capacity of 1.5 billlion $m^3$ and a strong downstream position (13.3 TWh of electricity and 40.4 TWh of gas sold in 2008 to approximately 1 million electricity clients and 1.2 million gas clients) and owns several businesses in Poland and Turkey, where it has the control of the gas distributors Bursagaz and Kayserigaz (source: EWE Annual Report 2008). EWE chose EnBW as strategic partner in order to develop its access to electricity sourcing, its means of production currently being limited to 72 MW, based solely on renewable sources dominated by onshore wind.

EWE is also the principal shareholder of VNG (47.89%), a gas company based in Leipzig the turnover for the 2008 financial year of which was €5.5 billion. VNG owns long-term import contracts with Gazprom, a storage capacity of 2.5 billion $m^3$, a gas transmission network well placed strategically to the east of Germany and a clientele made up of industrialists and Stadtwerke.

In return for this equity stake from EnBW in EWE, the German Cartel Office (Bundeskartelamt) asked on July 6, 2009 EnBW and EWE to sell either GESO Beteiligungs- und Beratungs- AG (electricity, gas and heat distributor in Saxony, wholly owned by EnBW), or the shares held by EWE in VNG (47.89%), to a third party.

In August 2009, EnBW received approval from the German Cartel Office (Bundeskartelamt) to acquire the shares held by EWE in VNG (up to 47.89%) and in December 2009 confirmed its interest for this acquisition by beginning the disposal of GESO.

Early 2010, EnBW initiated exclusive negotiations with TWD (Technische Werke Dresden), a wholly-owned subsidiary of the city of Dresden. Early March 2010, a sale agreement of GESO was entered into with TWD and the city council of the city of Dresden agreed to the GESO acquisition on March 18, 2010. The closing of the sale of GESO was completed on March 31, 2010.

Furthermore, EnBW is currently negotiating a share swap agreement whereby EnBW acquires additional shares of the Czech company Pražská energetika, a.s., resulting in a (direct and indirect) share holding of 69.9%. In return, EnBW seeks to divest its 24.3% shareholding in Pražská teplárenská a.s., (Czech Republic) in addition to a cash component. The proposed transaction is conditioned upon numerous conditions precedents.

EnBW and the Turkish group Borusan created a 50/50 joint-venture in April 2009. Both partners want to develop together in Turkey, over the coming years, electricity generation capacities from renewable energies, mainly from wind farms and hydropower. Currently, a wind farm of 60 MW (45 MW of them were installed in September 2009) and a hydropower plant of 50 MW are under construction. EnBW is studying the feasibility and profitability of other projects.

#### *6.3.1.2.3.5* Synergies within the EDF group

Since the end of 2003, EDF and EnBW have embarked on a common program to create synergies. They have therefore developed approximately 40 projects.

With regards to generation, cooperation is centered on internal projects within the Group:
- study for the construction of new EnBW fossil-fired power plants;
- in the area of hydropower, EDF and EnBW continue to cooperate in the realization of a fifth turbine in the Iffezheim power plant (increase of capacity of 38 MW) and in the construction of two new power plants at Kehl and Breisach respectively (capacity of 4 MW);
- in the operation of nuclear power plants, "Benchmarks" for maintenance and safety costs have been defined in order to optimize generation costs of power plants. In addition, a joint program of recruitment and training of bilingual engineers enables the cooperation to be strengthened.

In the sales and marketing field, EDF and EnBW are implementing a common strategy with regards to certain major industrial customers. This has allowed them to work side by side with customers and to increase sales. In the context of this strategy, EnBW has gained as new clients, the German steel producers RIVA, representing a capacity of 3,500 GWh of electricity on the 2009-2010 period.

Moreover, in some countries, such as Poland, the EnBW and EDF sales teams have been merged.

In the research and development field, in particular through the EIfER (the European Institute of Energy Research, created by EDF in collaboration with the Karlsruhe University), EDF and EnBW entered into an agreement in January 2003 regarding renewable energy, distributed generation and fuel cell batteries.

In the gas business, relationships between EDF and EnBW have continued to grow. Joint operations have already been carried out with regards to supply and transmission. EDF and EnBW executed together agreements for storage capacities of natural gas in Etzel in the north of Germany.

### 6.3.1.3 ITALY

The EDF group operates in Italy mainly through its shareholdings in Edison, the second operator on the Italian electricity market and third in the gas market. As of December 31, 2009, the Group held 19.36% of Edison's share capital directly (18.96% of its economic interests after accounting for shares in the employees savings plan), and 50% of the share capital of Transalpina di Energy (TdE), which in turn holds 61.28% of Edison's share capital (60% of its economic interests). Therefore EDF's direct and indirect stake in Edison is 50% of the voting shares or 48.96% of the economic interests.

The agreements entered into during the year 2005 by the Group with A2A S. A. (formely AEM S.p.A.) provided for the joint takeover of Edison by EDF and A2A S. A. (formely AEM S.p.A.). The terms and conditions of this takeover are described in section 6.3.1.3.1.2 ("Joint takeover of Edison by EDF and A2A").

Furthermore, the EDF group operates in Italy through the following subsidiaries and shareholdings:
- Fenice: as of December 31, 2009, the Group wholly-owns Fenice, which specializes in electricity generation, supply of energy-related services, solid and liquid industrial waste treatment, and environmental activities;
- Siram: the Group holds, through Dalkia and Dalkia International, a 50% interest in Siram. Siram specializes in energy-related services to customers in the service sector, industrial companies and local authorities;
- EDF EN Italia: this subsidiary (95% held) brings together EDF EN stakes in various energy projects in Italy, primarily in projects of wind and photovoltaic energy.

Finally, EDF implements the industrial partnership agreement entered into with Enel on nuclear power (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France") for a description of the main terms of the partnership agreement Industrial Enel signed on 30 November 2007 and two Memorandum of Understanding concluded by EDF and Enel on February 24, 2009), and continues to study the provision of thermal energy in France and of counterparts that Enel could be providing in Europe. Enel, under the agreement on nuclear power, has already posted some fifty engineers under training in EDF and the site of the Flamanville 3 EPR.

See also section 6.3.1.3.3 ("Nuclear renewal in Italy") below, concerning the involvement of the Group in reviving nuclear energy production in Italy.

#### Market environment: development of prices and demand in Italy

The executive order of the Italian Ministry of Economic Development dated April 29, 2009 (pursuant to the Italian law of January 28, 2009, n. 2, also known as the "Anti-crisis Order") defined the guidelines for reform of the Italian electricity market. In the first implementation phase, the order in particular provides for the introduction, as of October 31, 2009, of an infra-day market, which replaces the "adjustment market", allowing greater flexibility for operators and the development of futures markets for long term supply. It also calls for a more open distribution of tenders by players in the energy markets and a different service market structure to cut costs and increase transparency.

For further information on the environment, changes in market prices and demand in Italy (see section 9.2.1 ("Economic environment") below).

#### 6.3.1.3.1 EDISON

Edison is the oldest Italian electricity company. Edison is the second largest operator in the Italian electricity market (the main competitors being the national actor Enel, in first position, and ENI, E.ON, Tirreno Power, A2A)) and the third largest operator in the gas market (the main competitors being ENI and Enel). In 2009, net electricity generation by Edison in Italy was 41.6 TWh, which accounted for 15.0% of net electricity generation in Italy (50.2 TWh and 16.4% in 2008), and gas activities accounted for 13.2 Gm³, or 17%, of Italian gas demand (13.5 Gm³ and 16.2% in 2008).

In 2009, Edison generated €8,867 million of revenue and an EBITDA of €1,471 million (source: Edison's 2009 annual report). In EDF group's consolidated financial statements as of December 31, 2009, Edison is consolidated by proportional integration at 48.96%.

Edison is listed on the Milan stock exchange pursuant to whose regulations it publishes a certain amount of information (in particular, its annual report) that is available on its website (www.edison.it).

#### 6.3.1.3.1.1 Strategic interest of Edison shareholding

The Italian electricity markets have a strong strategic interest for EDF: the Italian gas market is the third largest European Union market, and the Italian electricity market, fourth largest European Union market, is a market related to the French market and that so far structurally has an average level of high prices. The position and ambitions for growth of Edison allow the Group to implement a balanced strategy in Italy based on Edison's ambitions to manage and develop its electricity production facilities, its portfolio of customers and its gas business.

In terms of supply, at the end of 2008 Edison had already started, and aims to continue for the coming years, a significant development of its electricity sales to residential customers and small and medium-sized companies, as well as its gas sales to large industrial customers. The development of a portfolio of end customers is part of the Group's strategy to promote the upstream-downstream balance of its positions.

In addition to the short-term synergies that can be developed between Edison and the EDF group (notably in the fields of engineering, equipment purchases, supply to large customers or services), there are also potential synergies on the trading activity and in the gas sector.

For the implementation of its natural gas business strategy, the EDF group can benefit from the experience that has been developed over the course of many years by Edison along the entire gas value chain, from exploration/production to direct supply of natural gas.

Furthermore, Edison is developing various infrastructure projects for delivering natural gas to Italy and plans to have independent import infrastructures permitting the delivery of gas coming from the Mediterranean and Caspian Seas for onward transportation to continental Europe. If these projects materialize, they could contribute to turning Italy into the gas transit center from South through North, creating opportunities to satisfy Group's needs in France and in Germany.

#### 6.3.1.3.1.2 Joint takeover of Edison by EDF and A2A

On May 12, 2005, EDF, AEM Milano, WGRM Holding 4 S.p.A. (a wholly-owned subsidiary of EDF) and Delmi S.p.A. (a subsidiary held at that time at 95% by AEM Milano) entered into a Structure Agreement and a Shareholders' Agreement governed by Italian law, relating to the implementation of their joint takeover of Edison and the exercise of their joint control. To further this goal, they formed Transalpina di Energia S.p.A. (TdE), a jointly-held holding company in which WGRM and Delmi each hold 50% of the share capital.

Since January 1, 2008, AEM Milano has become A2A S.p.A. ("A2A") after its merger with ASM Brescia S.p.A., ex- utility serving of Brescia in Lombardy. A2A is an integrated Italian operator, listed on the Milan Stock exchange, operating in the generation, importation, supply, transmission, distribution and sales of electricity and gas to end-users, as well as waste processing and urban heating.

Delmi is controlled by A2A, which holds 51% of its share capital and voting rights, by industrial partners holding 35% (ENIA, SEL and Dolomiti Energia) and by financial operators holding 14%.

##### *Specific provisions of the Structure Agreement*

The Structure Agreement whose provisions would stay in force until December 31, 2020, contains a provision relating to the change of control of A2A or Delmi. In the case of a third party other than the city of Milan acquiring the control of A2A (formerly AEM S.p.A), or in the case of a third party other than A2A appointing the majority of the members of the Board of Directors of Delmi, this provision gives EDF a call option to purchase Delmi's stake in TdE. The Structure Agreement has a similar provision as to EDF and WGRM towards A2A.

##### *Joint control of Edison*

The Shareholders' Agreement provides for rights and obligations of TdE shareholders, the exercise of joint control of Edison and the rights and obligations of EDF and A2A in respect of TdE and Edison.

##### *TdE*

The Board of Directors of TdE shall be comprised of 10 members elected by the shareholders, five appointed by EDF and five appointed by Delmi. Delmi appoints the TdE Chief Executive Officer, and EDF will appoint the Chairman of the Board of Directors. The meetings of the Board of Directors require a quorum of eight members, and decisions are made by a qualified majority of eight members. No director holds the right to a deciding vote.

##### *Edison*

In accordance with the Shareholders' Agreement, the Board of Directors of Edison is comprised of 13 members elected by the shareholders. These members are the five directors of TdE appointed by EDF, the five directors of TdE appointed by Delmi, two independent directors, one appointed by each of EDF and Delmi, and since April 2, 2008 one director appointed by the minority shareholders by election. Delmi appoints the Chairman of the Board of Directors and the Chief Financial Officer of Edison (who can also be a director); EDF appoints the Deputy Director (CEO) and the Chief Operating Officer (COO). The meetings of the Board of Directors require a quorum of 10 members and the decisions will be made by a qualified majority of 10 members. No director will hold the right to a deciding vote.

##### *Specific provisions of the Shareholders' Agreement*

The Shareholders' Agreement came into effect on September 15, 2005, and establishes the fundamental principle that the management of Edison will be determined exclusively by TdE.

The Shareholders' Agreement has a minimum duration of three years (five years if Edison ceases to be listed) and is then automatically renewed for the same duration, unless terminated by one of the parties six months before its term, in which case TdE will be dissolved.

As the Shareholders' Agreement has not been terminated before March 15, 2008, it has been extended by tacit renewal from mid-September 2008 for a new three-year period.

The by-laws of TdE contain a mutual preemptive right which will apply during the life of the company, but which does not apply in the event that WGRM sells all of its holdings to EDF.

The Shareholders' Agreement will be automatically terminated if EDF or A2A (directly or indirectly) cease to hold more than 50% of the voting rights which can be exercised at the Shareholders' Meetings of TdE or if the assets of Delmi are liquidated. EDF may also terminate the Shareholders' Agreement if A2A ceases to hold the majority of the voting rights of Delmi or ceases to appoint the majority of the members of the Board of Directors of Delmi.

A2A may terminate the Shareholders' Agreement if EDF ceases to directly hold 100% of the share capital of WGRM or if WGRM exercises any substantial activity other than the management of its holdings in TdE or Edison.

#### 6.3.1.3.1.3 Edison's business in the electricity sector

After Enel, Edison occupies the number two position in the Italian electricity generation market.

### *Generation*

The Edison group's installed generation capacity amounted to 12.3 GW as of December 31, 2009 (including 50% of Edipower's installed generation capacity representing 3.8 GW) with a net electricity generation in Italy of 41.6 TWh in 2009 (including the energy from 50% of the Edipower's generation capacity) (source: Edison).

In 2009, in a particularly tight market, Edison has reduced its exposure to spot markets (reduction in stock sales of 9.5 TWh in 2008 to 2.5 TWh in 2009) and increased its stock purchases, thus optimizing its supply sources.

In accordance with the agreements signed between shareholders, Edison holds, as of December 31, 2009, 50% of the capital and of the voting rights of Edipower. Pursuant to the Tolling Agreement (right to benefit from generation capacities at an agreed price) for the fossil-fired power plants and pursuant to a Power Purchase Agreement for hydroelectric power plants. Under these contracts, Edison will benefit from a right to 50% of Edipower's existing and future thermoelectric and hydroelectric generation capacities between January 1, 2004 and December 31, 2011. The remaining 50% is divided between Atel (20%), A2A (20%), and Iride (10%). The co-contractors are jointly committed to Edipower. If any of the parties fails to perform its obligations, the remaining co-contractors would have to purchase a quantity of energy equal to that of the defaulting co-contractor up to its respective share.

Edison's generation fleet and its corresponding generation (including its share in Edipower) in Italy is as follows:

**2009 Installed Capacity and Generation of the Edison group[1]**

| Edison + 50% Edipower | Installed capacity | | Generation | |
|---|---|---|---|---|
| | GW | % | TWh | % |
| Thermoelectric | 10.2 | 83 | 35.6 | 86 |
| Hydroelectric | 1.7 | 14 | 5.4 | 13 |
| Renewables | 0.4 | 3 | 0.6 | 1 |
| **TOTAL** | **12.3** | **100** | **41.6** | **100** |

*(1) Source: Edison.*

*Development projects*

Since late 2007, Edison has achieved most of its goals in terms of electricity generation capacities in Italy and focuses on bolstering its position in the Italian market and expanding into other European markets such as Greece, other Mediterranean countries, and the Balkan region.

In Greece, pursuant to the agreement signed mid-2008, Edison has created a company named Elpedison with local partner Hellenic Petroleum. This jointly owned company has been operational since March 12, 2009 and aims to become the second electricity operator in the Greek market. Furthermore, two other companies controlled by Elpedison were created in October 2009: the first company, Elpedison Power, brings together the combined-cycle gas turbine (CCGT) plant at Thisvi (420 MW) under construction in Greece and the CCGT plant (390 MW) at Salonicco, which is already operational. The second company, Elpedison Trading, is a trading company for the sale of electrical energy and the management of services.

In addition, the new Tirano-Campocologno interconnection line between Italy and Switzerland (150 MW) came into service at the start of October 2009. This line was constructed and is operated by the EL.IT.E S.p.a., which is jointly owned by Edison (48.45%), Raetia Energie (46.55%) and the city of Tirano (5%).

*Expiry of CIP6/92 agreements*

Edison's CIP6/92 sale agreements, entered into with GRTN, have a term of 15 years and will expire between 2007 and 2017. In 2009, the installed capacity of Edison's plants receiving CIP6/92 is approximately 1.8 GW. These contracts benefit from:

- a tariff, which is attractive, given average market prices;
- a dispatching priority to call upon power plants;
- an additional payment over the first eight years of the contract.

The impact of the CIP6/92 contracts on the operating margin of Edison will gradually decrease over the next few years as these agreements and premium expire.

### *Sales structure*

In 2009, Edison sold 60.4 TWh of electricity, including 41.6 TWh generated and 18.8 TWh bought on the markets (in particular on the spot market through optimization of the average cost of sources).

### *Supply*

Edison's supply activity, previously mainly focused on its industrial customers and SMEs, has developed since 2008 in the segment of both business customers and residential customers. 2009 was marked by a strong increase of sales to the end customers (+24.6% compared to 2008) and forward wholesales (+45.5% compared to 2008). The acquisition of a portfolio of 130,000 gas customers from AMG Palermo, completed in March 2009, contributes to meet the goals aimed and to strengthen the capacity of Edison to offer dual electricity and gas supplies to its domestic customers.

### *6.3.1.3.1.4* Edison's business in the gas sector

Edison ranks third after ENI and Enel in the Italian market for the supply and sale of gas, having a market share of 17% in 2009 (source: Edison).

In 2009, Edison purchased 12.6 $Gm^3$ of gas, to which can be added 1.8 $Gm^3$ of its own production (of which 0.6 was in Italy). Of the 12.6 $Gm^3$ in procurement, 8.7 $Gm^3$ corresponded to imports via pipeline and 1.7 $Gm^3$ to LNG imports. The remaining 2.2 $Gm^3$ is accounted for in particular by domestic procurement, stock variations and network losses.

In 2009, Edison supplied 1.4 $Gm^3$ of gas to the industrial sector, 3.0 $Gm^3$ to the residential sector and 8.1 $Gm^3$ to the thermoelectric sector. Edison uses gas as the principal source for its electricity production.

The medium to long-term protection of the gas supply constitutes a major challenge for Edison. Thus, Edison, according to the terms of a contract signed in May 2005 with its partners ExxonMobil and Qatar Petroleum, has access to 80% of the capacity of the offshore regasification terminal at Rovigo (8 $Gm^3$/year), i.e. 6,4 $Gm^3$/year, for a 25-year period. This terminal came on stream in the Fall of 2009. It was built by Adriatic LNG, a

company owned jointly by Edison (10%), ExxonMobil (45%) and Qatar Petroleum (45%).

On January 15, 2009, Edison signed a contract for the acquisition of a concession concerning exploration, production and development rights to the gas and oil deposits at Aboukir in Egypt. This field, which produces approximately 1.5 $Gm^3$/year of natural gas and 1.5 million barrels of oil per annum, had, at the time of its acquisition, reserves of approximately 70 $Gm^3$ of natural gas, 40% of which will fall to Edison. The concession, for an initial duration of 20 years, may be extended for a further 10 years at Edison's request. In addition, at the end of March 2009, Edison announced a new oil and natural gas find at Aboukir, which may enable production to be increased by some 30% above current levels.

In January 2009, the consortium made up of Edison (18.5%), Sonatrach (25%), Repsol (33.7%) and RWE Dea (22.5%) responsible for exploration-production in the Reggane North basin (southern Algeria) announced the discovery of two new deposits in Algeria.

Edison's aim as regards exploration-generation, in which the Aboukir investment plays a part, is to increase the proportion of gas produced 'in-house' to reach 15% of its total supply.

In Italy, Edison possesses two underground storage facilities, Cellino and Collalto. Edison is also involved in the following gas import infrastructure projects:

- ***GALSI project:*** pipeline intended to link Algeria and Italy via Sardinia with an annual capacity of 8 $Gm^3$. The first phase, corresponding to a feasibility study, has been completed. An agreement has already been signed between Edison and Sonatrach for the supply of 2 $Gm^3$ of conditioned gas on completion of this installation. An agreement between the Italian and Algerian Governments for the development of the pipeline was signed in November 2007. In September 2008, GALSI and Snam Rete Gas signed the final co-operation agreement for the construction of the project. In April 2009, Galsi confirmed that the final investment decision would be taken in the first half of 2010.
- ***ITGI Project*** (Turkey-Greece-Italy interconnection): pipeline intended to enable the transit of gas originating in particular from the countries of the Caspian Sea via Turkey, Greece and Italy. An agreement between the Italian, Greek and Turkish Governments for the development of the pipeline was signed on July 26, 2007. A company called IGI Poseidon SA was created in June 2008 and will build the pipeline between Italy and Greece (annual capacity 8 $Gm^3$). This company is held equally by Edison and by the Greek public gas distributor Depa. The construction of the pipeline will start once the supply contracts have been signed. In addition, on July 14, 2009, Edison, BEH (Bulgarian Energy Holding) and Depa signed a Memorandum of Understanding for the construction of the Greece-Bulgaria interconnector (GBI), a branch of the ITGI pipeline with a capacity of 3 to 5 $Gm^3$ per year. The Greece-Bulgaria construction agreement provides for the creation of a joint venture held equally by BEH and IGI Poseidon SA. Furthermore, BEH and IGI Poseidon SA finalized on March 4, 2010 an agreement for the creation of the Asset Company (owned on a 50/50 basis by BEH and IGI Poseidon SA), which will carry the GBI.

In the medium term, Italy may become a country through which gas will transit from the South to the North of Europe. In this perspective Edison is pursuing its development and its consolidation in gas transportation in order to improve the competitiveness of its procurements, while contributing to the diversification and security of gas supplies in Italy.

### 6.3.1.3.2 FENICE

Fenice is a wholly owned EDF subsidiary that operates the electricity, heat, and compressed air production plants and associated distribution networks, along with the historically associated environmental assets, that EDF acquired from Fiat when EDF purchased Fiat's stake in Fenice. Today, Fenice focuses on supplying electricity and environmental services to manufacturing companies and public agencies, alongside with a rapid building of new co-generation facilities (combined production of electricity and heat) or trigeneration (combined production of electricity, heat and cold).

In 2009, Fenice generated €488 million of sales.

Fenice operates mainly in the field of outsourced management and operation of co-generation and tri-generation plants, electricity substations, fossil-fired power plants that produce both superheated water and steam for industrial use or site heating, cold generation power plants, compressed air generation units, and internal electricity distribution units, and different energetic fluids (hot air, refrigerated air, industrial compressed air and gas).

In terms of energy assets, Fenice has on December 31, 2009, electricity generation capacities of 521 MW and heat generation capacities of 3,215 MWth.

In Italy, Fenice has 60 generation sites of thermal power generation facilities (steam, superheated water, and hot water), electricity and compressed air.

In addition, Fenice operates and maintains, for third parties, at this date, 8 combined-cycle gas turbines including 6 that have the CIP6/92 statutory.

At the time of the sale of Fenice to EDF, it was decided to maintain and develop industrial and commercial relations with the Fiat group. The Fiat group therefore entered into service agreements with Fenice prior to 2002 for a minimum duration of eight years, which led to the transfer of assets to Fenice. These agreements were renegotiated in end of 2006, and as a result, their duration has been extended until 2012 and new development projects have been agreed on. If these agreements were not to be renewed in 2012, Fiat is committed to buy back from Fenice all of the assets used for these agreements for an amount equal to the net book value of these assets. The corresponding workforce would be retransferred to Fiat.

Outside Italy, Fenice owns a subsidiary in Spain, Fenice Instalaciones Iberica, and one in Poland, Fenice Poland S.p.z.o.o. These wholly owned subsidiaries operate mainly combined power, heating, and cooling plants for third parties, and provide the associated energy and environmental services (heating and cooling systems, compressed air, industrial gases, and waste and wastewater treatment). Fenice also owns 100% of a third subsidiary in Russia, Fenice Rus, created in November 2009 with the aim of marketing services in the field of energy efficiency. Two first contracts have already been concluded with Russian companies.

Furthermore, Fenice is active in the environmental sector. The company builds and operates wastewater treatment plants, runs an incinerator for industrial and municipal waste, provides environmental consulting services, etc.

Since its acquisition by the EDF group, Fenice has pursued a policy of diversifying its customer base and its sector of activities. This policy was revised during 2009 due to the economic crisis at the end of 2008, which seriously impacted the automobile industry. The object was to prioritize the following strategies:

- the reinforcement of relations with its historical customer, the Fiat group, through the implementation of a strategic industrial partnership designed to prepare for the renewal of contracts at the end of 2012;

- the reorganization of its development activities, centered principally on energy efficiency and environmental services in key markets, through the implementation of strategic partnerships. In Italy, this process is supported in particular by a strategic partnership with Edison. Fenice plans to extend its activities in Spain and Poland and in the countries of central Europe, benefiting from incentive systems that are already in existence or in the process of being implemented;
- on November 27, 2009, EDF and Russian company Inter RAO (a publicly quoted company in which the state has a majority shareholding) agreed on the creation of a joint company held equally by Fenice and Inter RAO with the aim of developing energy efficiency projects in Russia. The creation of the joint venture, called Interenergoeffect was completed on March 2, 2010 and embodies the framework cooperation agreement signed September 20, 2008 between the two companies, which aimed at considering joint development projects in Russia and other countries.

#### 6.3.1.3.3 NUCLEAR RENEWAL IN ITALY

The Italian Government a clearly demonstrated its intention of reviving nuclear power in Italy, with aims that are quite ambitious: ultimately to reach around 25% nuclear energy production, with new Italian nuclear plants (eight to ten units), the first of which would be operational by 2018. In this framework, an important stage was marked with the framework agreement signed between France and Italy during the Franco-Italian summit on February 24, 2009 concerning collaboration in nuclear matters and covering all aspects of the industry (from research to waste processing).

During this summit, agreements were also signed between EDF and ENEL, providing especially for:

- an extension of the participation of ENEL in the new French nuclear program by associating it with the construction and operation of the new EPR reactor at Penly;
- and the creation of a joint venture held equally by EDF and ENEL, to be charged with the feasibility studies for the development of at least 4 EPR reactors in Italy.

Pursuant to this, on July 31, 2009 in Rome, EDF and Enel set up a joint venture named Sviluppo Nucleare Italia SRL. Once the feasibility studies have been completed and the formal investment decision has been taken, the companies, which will build, own and operate the future EPR nuclear plants that EDF and Enel wish to develop in Italy, will be constituted. Other partners may be invited to participate.

The agreement lays down that a board of eight members will ensure the corporate governance of the joint venture, whose registered office is located in Rome. Four members will be appointed by EDF and four by Enel. The President and the Executive Vice-President will be designated by EDF, the CEO will be designated by Enel.

Legislatively, the Italian statute of July 23, 2009, n° 99/2009 entitled 'Provisions for the development and internationalization of companies and the power industry' (also known as the "Development law") passed into law on August 15, 2009. This statute establishes specific provisions with regard to nuclear power, measures for the organization, safety, reinforcement and efficiency of the energy sector, and support for renewables, market transparency and competitiveness.

More precisely, in regard of nuclear power, Article 25 of the Development law accords the Italian Government a period of six months to implement the executive orders concerning the criteria governing the location of nuclear power production installations on national territory, waste storage solutions and compensatory measures intended for the populations concerned. Article 26 also accords the Inter-ministerial Economic Planning Committee (CIPE) a period of six months to define a resolution confirming the nuclear technologies to be authorized in Italy among those authorized by the member countries of the OECD over the 10 last years. The CIPE must also define the criteria and measures to be adopted to encourage the creation of consortia for the construction and operation of nuclear plants in Italy. Finally, Article 29 concerns the creation of an independent and self-governing Nuclear Safety Authority.

On February 10, 2010, the Italian Council of Ministers gave final approval to the executive order that determines the general criteria governing the location of future plants and the economic compensation measures (tax reductions, energy price concessions etc.) applicable in those areas that will site nuclear installations.

### 6.3.1.4 REST OF EUROPE

#### 6.3.1.4.1 COUNTRIES IN CENTRAL AND EASTERN EUROPE

**Group operations in Central and Eastern European countries**

The Group operates in three central and eastern European countries: (i) Poland (electricity generation, cogeneration), (ii) Hungary (cogeneration, distribution), and (iii) Slovakia (distribution).

Apart from EDF's shareholdings, EnBW also has minority holdings in Poland (electricity generation, cogeneration and heat distribution), Hungary (electricity generation, distribution) and the Czech Republic (electricity distribution, cogeneration). The EDF group also operates in these countries through its subsidiary Dalkia International, mainly in co-generation intended for major urban heating systems.

Most business expansion potential lies in upgrading existing power plants or building new plants. Opportunities also exist for privatization, especially in Poland.

In Russia, EDF has initiated a cooperation (through its Italian subsidiary Fenice) with the company Inter Rao EES.

##### *6.3.1.4.1.1* Poland

***The EDF group's activities in Poland***

The Group operates through the following four main subsidiaries:

- the Group controls the EC Wybrzeze co-generator in the Gdansk region. EC Wybrzeze has an installed generation capacity of 331 MW and 1,199 MWth;
- the Group controls the electricity generation company ERSA[1] in the Rybnik region, which has an installed capacity of 1,775 MW. ERSA owns 100% of Everen, a company marketing the electricity generated by all the EDF group's plants in Poland. The renewal of 4 coal production units of 220 MW each is studied for 2015. In this context, a European call for tender was launched in December 2008, to select the supplier of main equipment (boiler, turbine, etc.). Further study and analysis of tenders received should allow a decision in mid-2010;
- the Group also controls the co-generator of the town of Krakow, EC Krakow. EC Krakow has an installed capacity of 460 MW and 1,118 MWth. On March 19, 2009, the EDF group signed a contract for the acquisition from the Polish Treasury Ministry of a 28.05% holding in the Polish company EC Krakow. Following this transaction, the EDF group holds 94.3% of the capital of EC Krakow. The transaction is in line with the Group's strategy of reinforcing its positions in Poland; and

1 EDF holds a direct holding of 46.05% in ERSA, plus an indirect holding of 18.82% through EC Wybrzeze, a company owned at 96.73% by EDF. Finally, EnBW holds a 32.44% stake in ERSA.

- in 2009, the Group through its subsidiaries held 50% plus one of the shares of the co-generator Kogeneracja in the Wroclaw-Czechnica region (the stake as a percentage is 35.61%). Its installed generation capacity is 363 MW and 1,106 MWth. Kogeneracja owns 98.4% of the heat and power generation company, EC Zielona Gora (whose installed capacity is of 221.4 MW and 322 MWth).

The company Energokrak owned by ERSA, EC Krakow, EC Wybrzeze and Kogeneracja, oversees the coal and biomass supply of all EDF group's sites in Poland.

In respect of environmental protection, the EDF group has heavily invested in recent years to bring its facilities in compliance in Poland. He is the leader of the burning of biomass, which will reach approximately 10% of its fuel supplies by 2010.

In addition, EDF has launched in January 2008 a major organizational integration project of its subsidiaries in Poland. It aims, in particular to generate productivity gains by the pooling of support functions and by disseminating best practices within the subsidiaries. The timetable plans, from mid-2010, the pooling of resources for all subsidiaries in Poland in the following areas: finance, IT, procurement, human resources, maintenance and engineering.

EDF will then consider the merger of its subsidiaries in a single entity allowing in particular the Group to have a greater visibility vis-à-vis market players and public authorities. It will also be better able to grasp development opportunities in Poland and beyond.

On November 17, 2009, EDF and Polska Grupa Energetyczna (PGE, Poland's leading electricity operator, which is listed on the Warsaw stock exchange) signed a cooperation memorandum in the field of nuclear energy. The memorandum is particularly concerned with the carrying out of feasibility studies into the development of EPR nuclear reactors in Poland and the construction of the first Polish EPR in Poland before the end of 2020. The two groups also announced their intention to open discussions on the possibility of an industrial partnership to build EPR nuclear plants in Poland.

The restructuring of the Polish electricity sector continues. Following PGE's successful debut on the stock exchange in the fourth quarter of 2009, the other three integrated energy operators Enea, Tauron and Energa are likely to be privatized in 2010.

#### *6.3.1.4.1.2* Hungary

***The EDF group's activities in Hungary***

In Hungary, the Group is developing its generation, supply and distribution businesses, through two main subsidiaries: BE ZRt and DÉMÁSZ ZRt:

*BE ZRt:*

As of December 31, 2009, EDF owned 95.57% of BE ZRt, which is based in Budapest and generates heat and electricity. BE ZRt has an installed electricity generation capacity of 409 MW and heat generation capacity of 1,366 MWth, and supplies 60% of Budapest's heat needs. Its total electricity (1.7 TWh/yr) was sold, up to the end of 2008, to a single Hungarian purchaser, Magyar Villamos Muvek Zrt. (MVM) through three power purchase agreements (PPAs) expiring in 2011, 2021, and 2024. The European Commission, by decision dated June 8, 2008, demanded the termination of Hungarian PPA on the grounds that they constitute illegal State aids. On November 10, 2008, the Hungarian Parliament passed a law declaring the termination of PPA at December 31, 2008. Since January 1, 2009, BE ZRt has sold half its electricity through a new eight-year commercial contract with MVM, and the other half to the power system operator MAVIR within the framework of a regulatory mechanism with cogeneration support, which is initially valid until December 31, 2010. By a resolution dated January 7, 2010, the Hungarian energy regulator extended the period in which BE ZRt is to benefit from the mechanism until mid-2013.

BE ZRt has lodged an appeal before the Court of First Instance of the European Union in Luxembourg against the European Commission's decision to launch an enquiry into PPAs as well as its decision finding the Hungarian PPAs unlawful and demanding that the Hungarian State terminate them and that the unlawful State aids be reimbursed. For its part, EDF has filed international arbitration against Hungary based on the Energy Charter Treaty to obtain fair compensation following the forced termination of its PPAs.

*DÉMÁSZ ZRt:*

DÉMÁSZ ZRt, which is wholly-owned by EDF, is an electricity distribution network and supply operator.

In 2009, DÉMÁSZ ZRt supplied 6,375 GWh of electricity to 775,000 customers on the wholesale market.

Distribution: DÉMÁSZ Hàlozati Elosztó Kft (a wholly-owned subsidiary of DÉMÁSZ ZRt) was created on July 1, 2007, to comply with the legal requirement that regulated and non-regulated businesses be separated. It owns the electricity grid assets (around 32,000 km of high-, medium-, and low-voltage lines) and operates the regulated distribution business in Hungary's south-east region (19.6% of the territory), supplying power to 774,000 delivery points.

Supply:

- under the universal service concept (as defined by Hungarian Government decree nº 2007/273 (X. 19.) pursuant to the Hungarian Electricity Act (act LXXXVI of 2007) DÉMÁSZ ZRt oversees the supply of electricity to individuals, small businesses and public institutions in the south-east region of Hungary;
- open market: since December 31, 2009, DÉMÁSZ ZRt has been directly involved in the supply of electricity across Hungary to customers who opted for the open market. These activities were previously performed by EDF Energia Hungária Kft, its wholly-owned subsidiary.

Since December 31, 2009, the EDF name has been used in the DÉMÁSZ subsidiary, which is now called EDF DÉMÁSZ ZRt. This brings together the two commercial brands on the Hungarian market: EDF DÉMÁSZ for residential customers and EDF Energia for B2B customers.

EnBW also has minority holdings in Hungary (i) in the producer Matrai, which has an installed capacity of 836 MW, (ii) in the distribution network operator ELMÜ, which serves an area of more than two million inhabitants including Budapest and (iii) in the distributor EMASZ (source: EnbW and RWE 2008 annual reports).

The Group is also looking at projects to expand generation capacity, notably through gas-fired combined cycles, in order to strengthen its position in Hungary.

#### *6.3.1.4.1.3* Slovakia

***The EDF group's activities in Slovakia***

The Group operates in Slovakia through a 49% holding in the distribution and supply company, Stredoslovenská Energetika, a.s. ("SSE"), based in the center of Slovakia (province of Zilina), which covers approximately one-third of the country's territory. SSE has almost 33,000 km of high, medium-voltage and low power lines. As of December 31, 2009, SSE had over 640,000 customers representing 4,739 GWh.

In order to be in compliance with regulatory requirement of regulated and non regulated activities separation, SSE's regulated activities have been

transferred from July 1, 2007, to its wholly owned subsidiary Stredoslovenskà energetika – Distribucia a.s. ("SSE-D"). As of December 31, 2009, SSE-D has around 712,000 delivery points and distributes 5,458 GWh.

In accordance with the shareholders' agreement entered into on June 25, 2002 with the Slovak National Property Fund, the EDF group names three of the five members of the SSE Executive Board, including the Chairman and has one representative among the nine members of the Supervisory Board. At the Shareholders' Meeting, decisions are made unanimously by the two shareholders.

Within the context of the continuing privatization process, the aforementioned shareholders' agreement gives the Group a preemption right over 2% of SSE's shares.

On March 1, 2010, SSE completed the commercial commissioning of a 50 MW gas plant, which aims at supplying system services to the operator of the Slovak network.

The Group intends to grow its share of this market and is looking into various capacity expansion projects notably through gas-fired combined cycles.

#### *6.3.1.4.1.4* Czech Republic

***The EDF group's activities in the Czech Republic***

The Group operates in electricity generation and distribution in the Czech Republic through EnBW holdings in PRE-Holding and PT Holding, respectively, the electricity distribution, and the heat distribution companies of the city of Prague.

#### *6.3.1.4.1.5* Russia

Two agreements were signed during the Franco-Russian intergovernmental summit of November 27, 2009:

- EDF and O.A.O. GAZPROM announced the signing of a memorandum of understanding on the possibility of EDF participating in the construction of the offshore section of the South Stream gas pipeline (see section 6.4.2 ("Natural gas businesses")). Under the terms of this agreement, EDF and Gazprom may also expand cooperation in the electricity sector in France and elsewhere;
- EDF and Inter RAO agreed to the creation of a 50/50 joint venture between Fenice, an EDF subsidiary (see section 6.3.1.3.2 ("Fenice")), and Inter RAO, with the aim of developing energy-efficient projects in Russia. The joint venture, called Interenergoeffect, was created on March 2, 2010 during the state visit of the President of the Russian Federation in France.

EDF and Inter RAO also agreed to develop their strategic partnership and will examine the feasibility of carrying out cross investments between themselves or their subsidiaries, among other things.

### 6.3.1.4.2 BENELUX

The Benelux constitutes a consistent electricity zone with significant links with the Franco-German market place, thus presenting profitable development opportunities in electricity generation. Furthermore, Benelux countries form an important hub for the European gas market due to their numerous import and transit infrastructures and the Zeebrugge hub[1].

**The EDF group's activities in the Benelux**

***EDF Belgium***

Through long-term cooperation with Electrabel in the nuclear energy field, EDF holds 50% of the Tihange 1 nuclear power plant through its wholly-owned Belgian subsidiary, EDF Belgium S.A. The power attributed to EDF represents 3% of Belgium's generation capacity. Tihange 1's generation, which is attributed to EDF Belgium SA is sold in Belgium to a Belgian operator through a long-term agreement which expires in 2015. In addition, EDF Belgium S.A. has begun preliminary technical and environmental studies in order to obtain the licenses needed to build two gas-fired combined cycle plants in Flanders through two dedicated subsidiaries. The trading business of EDF Belgium S.A. is oriented towards the industrial market and that of SMEs. Sales of electricity were stable in 2009, with a volume of 1.26 TWh, while gas sales, which were launched in 2007, showed a further increase to 1.77 TWh in 2009.

***Acquisition of 51% of the capital of the Belgian operator SPE***

On May 11, 2009, EDF and Centrica signed two separate agreements concerning a 20% investment by Centrica in EDF's nuclear operations in the UK, and Centrica's sale to EDF of its 51% holding in SPE, Belgium's second biggest electricity producer, better known through its brand SPE-Luminus.

The Completion of these agreements was subject to the approval of Centrica's shareholders (received in June 2009) and the authorization of the EC competition authorities (received on November 12, 2009 (see below)). Centrica also obtained the approval of the UK Office of Fair Trading on August 7, 2009.

Concerning the acquisition of 51% of SPE, EDF notified the European Commission (General Competition Directorate) of the concentration on September 23, 2009. On November 12, 2009, the European Commission approved EDF's acquisition of Centrica's 100% interest in Segebel, which owns 51% of SPE. The approval came at the end of "phase 1" of the procedure, in return for commitments from EDF to dispose, in the near future, of one of the two combined cycle gas projects it is developing in Belgium and to sell the remaining project at a later date, but only if it decides not to make the corresponding investment in the project within an agreed period.

The transactions provided for by these agreements – excluding the fulfillment of the aforementioned return commitments – were concluded on November 26, 2009.

As from the change in SPE's main shareholder and in accordance with the SPE existing shareholders' agreement, the Belgian minority shareholders[2] had three months after completion of the purchase of Segebel to exercise their right to announce their intention of exercising an individual right to sell their stake to EDF. For the minority shareholders who have not yet exercised their right, the exercise period was extended to the end of April 2010.

EDF's industrial plans for SPE are to increase SPE's operational and financial performances, while supporting its development for the benefit of competition in the Belgian energy market.

EDF intends to preserve the company's Belgian identity.

SPE is both a generator of electricity and a supplier of electricity and gas. It is the second largest player on the Belgian energy market[3] with an installed electricity generation capacity of 1,969 MW and a stake in Belgian nuclear plants amounting to 411 MW (SPE also has drawing rights on the Chooz French nuclear plant in the context of trading rights with the Tihange 1 plant). In 2009, SPE's electricity generation reached nearly 8.8 TWh and represented approximately 12% of Belgium's electricity generation. It employs nearly 1,000 people.

1 Gas market established at the junction of transportation infrastructures where gas arrives from various sources offering the possibility of physical exchange of gas.

2 Belgian municipalities (Publilec 24.8%, Publilum 10.7%, Socofe 4.9%, VEH 2.1% and ALG 0.1%), and Belgian financial institutions (Dexia 6.1% and Ethias 0.2%).

3 CREG, CWaPE, Brugel and Vreg joint release: "The development of electricity and natural gas markets in Belgium", dated April 28, 2009.

Excluding its holdings in Belgian nuclear power plants, the SPE's power installations mainly comprise natural-gas-fired electricity plants (nearly 1,150 MW), several hydropower plants (over 70 MW) and onshore wind turbines (via its subsidiary SPE Power Company SPEPCO) distributed across over 20 sites in Wallonia and Flanders. At end-2009, SPE reached the figure of 46 wind turbines, with an installed power capacity of 83 MW, making it the number one wind power operator in Belgium.

SPE also has interests in a number of biomass processing companies. Additionally, it has announced its intention to develop a two-unit gas-turbine power plant with an output of around 420 MW each in Visé ("Navagne Project").

Under the Luminus brand, SPE delivers electricity and gas to approximately 1.58 million private and professional customers delivery points, bringing its market share to 20%[1]. SPE is also active on the national and international wholesale markets.

***The Netherlands***

In July 2006, EDF entered into a partnership agreement with the Dutch company Delta N.V. for the development and the construction of an 870 MW natural gas power plant in the south-west of the Netherlands. On March 29, 2007, EDF and Delta created a joint-venture, Sloe Centrale B.V., whose corporate purpose is the construction and operation of the new power plant. This partnership includes a 50/50 share in investments, joint operation of the facilities and a 50/50 share in the electricity generated. The first unit, with an output of 435 MW, was commissioned on October 20, 2009. The second 435 MW unit was officially commissioned on December 13, 2009.

### 6.3.1.4.3 SWITZERLAND

Switzerland represents an industrial interest for the Group due to its geographic position in the center of European electricity transfers and because of its important capacities in terms of peak generation.

**EDF group's activities in Switzerland**

The Group operates in Switzerland through:

1. EDF's ownership of a stake in the new Swiss energy company Alpiq Holding SA (formerly Atel Holding SA). EDF's direct interest in the company is 25%. EnBW also holds a 2.30% stake in the share capital of Alpiq Holding SA.

   Alpiq is a leading player on the European energy market. It emerged out of the consolidation, on January 27, 2009, of the industrial assets of Atel Holding and of EOS Holding and the bringing in of EDF's portion of energy purchase rights and duties on the Emosson dam in Switzerland. It is an integrated electricity company of significant size in the heart of the European electricity market, active across the entire business chain of energy generation, transmission, trading, supply and services, and present in 26 European countries.

   Based on its proforma sales for 2009 as published by Alpiq (CHF 14.82 billion), the group constituted by Alpiq is the highest ranking Swiss electricity company (135.2 TWh sold in 2009, mainly on wholesale markets and to major European customers in southern Europe and in the Central and Eastern European countries ("CEEC")). Alpiq also supplies approximately 100,000 customers in north-west Switzerland. This business is based on major generation and transmission assets in Switzerland and in countries where Alpiq is developing its business. In 2009, Alpiq had a total installed capacity proportional to its holdings of 6,322 MW of hydropower, nuclear energy and conventional fossil-fired power.

   The merger of the industrial activities and personnel of the Atel and EOS groups was carried out in 2009.

   Alpiq continued its development in several European countries:

   - downstream in Spain (the acquisition of EDF's sales company, Hispaelec, was finalized on December 30, 2009) and in Romania (acquisition of EHOL Distribution, which supplies large industrial customers);
   - upstream in Italy (construction of a 400 MW gas-fired combined cycle in San Severo) and in France, especially the construction of a gas-fired combined cycle power station in Bayet with a capacity of over 400 MW);
   - in energy services through its subsidiaries AIT and GAH in Switzerland and Germany.

   As part of the process of renewing its nuclear power plant in Switzerland, Alpiq pushed head with its application to build a new nuclear power station in Niederamt (Canton Solothurn).

2. a 81.72% EnBW holding as of December 31, 2009 in Energiedienst, which produces and supplies run-of-river hydropower from dams on the Rhine river (7.4 TWh sold in 2009). Energiedienst also wholly owns EnAlpin, which produces and supplies run-of-river hydropower on the dams of the Rhône river.

3. The EDF group's holdings in hydropower generation facilities on the border, which generated 0.2 TWh of energy rights for EDF in 2009.

### 6.3.1.4.4 AUSTRIA

Austria is located in the center of electricity and, especially, gas interconnections of the European network. It is strongly integrated with the market in Germany and is therefore of interest to foreign investors. Hydropower plants represent 70% of Austria's fleet of generation facilities.

**EDF group's activities in Austria**

On June 26, 2009, EDF announced that it had increased its interest from 20% to 25% in the Austrian power group ESTAG. This new position follows the purchase of GDF SUEZ's 20% stake in the Investment Company in Austria (*Société d'Investissement en Autriche* or "SIA"). The EDF group now owns 100% of SIA, which itself owns 25% of ESTAG's share capital (corresponding to a minority blocking interest in Austrian law). The Land of Styrie owns the remaining ESTAG shares and entered into a shareholders' agreement with SIA, giving SIA greater powers than its blocking minority. ESTAG heads a group of Austrian companies operating in the fields of energy, waste treatment and associated services. Centred around Styrie, the ESTAG group is also developing its business in the other Austrian Lands and some neighboring countries. Its two main subsidiaries are Steweag-Steg, the number one electricity distributor and retailer in the Land of Styrie and Steierische Gas und Wärme (STGW), transporter, distributor and retailer of gas and heat in the same region.

In addition, EnBW operates in Austria through:

- a minority holding in Energie-Versorgung Niederösterreich (EVN), an electricity, gas and heat transmission, supply and distribution company, in the Land of Lower Austria. EVN is held at 51% by this same Land. EVN is the top distributor-supplier in Austria in terms of number of customers; and
- management of electricity delivery and purchase agreements with TIWAG and Illwerke VKW, two electricity transmission and distribution companies operating in the Lands of Tyrol and Vorarlberg, respectively.

1 Source: 2008 Annual Report of the Electricity and Gas Regulation Committee (*Commission de Régulation de l'Électricité et du Gaz* – CREG).

### 6.3.1.4.5 SPAIN

**• Hispaelec Energía SA**

On December 30, 2009, EDF sold to Alpiq its wholly-owned subsidiary, Hispaelec Energía SA, a electricity retailer in Spain, which was set up in 1999.

**• Elcogas**

As of December 31, 2009, the EDF group owns 31.39% of Elcogas' share capital. Elcogas operates an innovative Integrated Gasification Combined Cycle (IGCC) "clean coal" plant at Puertollano with a gross power of 335 MW powered by gasification of local coal and petcoke. In addition to natural gas, this installation allows the use of coal and oil cokes, which produce atmospheric emissions that are far below European standards. This facility is the largest solid fuel power plant of this type in the world. In 2009, Elcogas produced 1.5 GWh, including 1.3 GWh in IGCC mode.

**• The EDF group's other activities in the Iberian Peninsula**

In addition to these directly owned companies, EDF is active in the Iberian Peninsula through Fenice Iberica, the wholly-owned Spanish subsidiary of Fenice spa (see section 6.3.1.3.2 ("Fenice")), which develops energy and environmental activities and cogeneration projects, EDF Énergies Nouvelles and EDF Énergies Nouvelles Réparties, which opened a new office in October 2009 to expand its activities in the area, and EDF Trading, which has been active on the Spanish market for a number of years.

## 6.3.2 United States of America

The United States is the largest energy market in the world, with total power generation of 4,119 TWh in 2008[1] and a projected average annual growth rate of 1% between 2008 and 2030.[2]

Numerous challenges lie ahead for the US electric power sector given the significant long-term need for new generation and transmission investments, deteriorated economic and financial conditions brought about by the recession and environmental constraints. Based on an industry analysis[3], the electric utility industry's total infrastructure investment needs amount to $1,500–2,000 billion by 2030.

The Energy Information Agency stated that between 184 GW and 259 GW of new capacity are required by 2030, relative to 2007. Between 1987 and 2007, 320 GW of new capacity were built.[4]

In this context, nuclear plants projects are under development by many of the major US energy companies. The 2005 Energy Policy Act ("EPACT") introduced incentives to encourage investments in nuclear power plants. These include a federal loan guarantee to reduce the borrowing costs of some types of construction loans, production tax credits for electricity companies under certain conditions, and standby support for regulatory risks.

1 Source EIA, Electric Power Annual January 2010.

2 Source: EIA Annual Energy Outlook, Published Version, March, 2009. In the reference case, electricity demand increases by 26 percent from 2007 to 2030, or by an average of 1.0 percent per year. The largest increase is in the commercial sector (38 percent), where service industries continue to lead demand growth, followed by the residential sector (20 percent) and the industrial sector (7 percent).

3 Source: Brattle Group; Transforming America Power Industry; The investment Challenge 2010-2030; November 2008.

4 Source: EIA Annual Energy Outlook, Published Version, March, 2009; Represents the EIA "low economic growth" and "reference" cases, respectively in EIA Annual Energy Outlook.

5 In his FY 2011 budget presented on February 1, 2010 President Obama included an additional $36 billion in loan volume guarantees for advanced nuclear power plants. This is a proposal upon which Congress will vote in 2010 (Source: Office of Management and Budget).

The initial amount of the federal loan guarantees for new nuclear projects has been set to $18.5 billion[5]. 18 requests for files relating to construction and operation licenses (for 28 reactors) have been filed with the American Nuclear Regulatory Commission ("NRC") and 14 power companies (for 21 reactors) have applied for a financing guarantee from the Department of Energy for an aggregate amount of approximately $122 billion. The recipient of the first conditional loan guarantee ($8.3 billion) was announced on February 16, 2010. Calvert Cliffs 3 is also among the projects selected in 2009 by the Department of Energy[6] for final due diligence (see section 6.3.2.2.3 ("Calvert Cliffs 3 project") below).

The American Recovery and Reinvestment Act of 2009 ("ARRA") signed into law by President Obama in February 2009 has created $787 billion in economic stimulus spending and tax incentives, of which over $60 billion are energy-related provisions[7]. These provisions are targeted to support deployment of clean energy technologies, notably renewables, smart grid, electric vehicles, and energy efficiency. Furthermore, increased concern for energy security and environmental sustainability has created momentum in the US for de-carbonizing its economy with initiatives both at congressional level (climate change bill establishing an economy-wide cap-and-trade under discussion) and executive level (e.g. the Environmental Protection Agency's endangerment finding of December 2009, a national fuel economy program).

In this context, the EDF group has enlarged its US footprint through the investment in Constellation Energy Nuclear Group, LLC ("CENG"), the joint-venture with CEG which combines all CEG's nuclear generation activities (see section 6.3.2.3.1 ("Creation of a new joint-venture with CEG") below). Economic, environmental and clean energy benefits are expected from the Group's investment in CENG, as well as from the other EDF group's entities in the US.

### 6.3.2.1 NUCLEAR STRATEGY IN THE US

The EDF group has been involved, through Unistar Nuclear Energy, LLC ("UNE"), the 50-50% joint venture established in July 2007 with the US-based Constellation Energy Group, Inc. ("CEG"), in the nuclear renaissance in the US with a stated objective to develop a standardized fleet of US EPR. In addition, the EDF group advanced its partnership with CEG after completion in November 2009 of its 49.99% investment in CENG.

This double-pronged partnership with CEG gives to EDF group opportunities in being a significant player in the US nuclear renaissance with access to attractive sites.

As at December 31, 2009, EDF group held 8.44% of CEG share capital. CEG, a "FORTUNE 500" company headquartered in Baltimore, is among the 10 largest nuclear operators in the US and has an outstanding operational record (capacity factor of 90 + for all 3 CENG plants over the last 5 years). CEG supplies energy products and services to wholesale and retail electric and natural gas customers. It owns a diversified fleet of generating units located in the United States and Canada, totalling approximately 7,100 MW of generating capacity at the end of 2009, and is among the leaders pursuing the development of new nuclear plants in the United States. The company delivers electricity and natural gas through the Baltimore Gas and Electric Company (BGE), its regulated utility in Central Maryland. CEG had revenues of $15.6 billion in 2009, a decrease of 21% compared to 2008. 2009 fiscal year resulted into a net income of $4.50 billion for CEG (Source: CEG's Form 10-K).

6 Source: World Nuclear Association.

7 Source: Congressional Research Service PL 111-5.

## 6.3.2.2 UNISTAR NUCLEAR ENERGY

### 6.3.2.2.1 AGREEMENT DATED JULY 20, 2007 RELATING TO UNISTAR NUCLEAR ENERGY

On July 20, 2007, EDF and CEG signed an agreement to create a 50/50 joint venture named "Unistar Nuclear Energy, LLC" ("UNE"). The purpose of UNE is to build, own, and operate a standardized fleet of up to four Evolutionary pressurized water reactor (EPR) nuclear plants in the US.

On the signature of the joint venture agreement, EDF has paid in an initial $350 million of capital to the joint-venture.

In 2008, additional contributions of $100 and $75 million were made, respectively to the first license application registration for construction and operation to the American Nuclear Regulatory Commission for the Calvert Cliffs 3 project (March 2008) and the second license application for the Nine Mile Point 3 project (late September 2008).

In return for EDF's cash contributions, Constellation Energy provided UNE with its participation in the joint venture with AREVA, named Unistar Nuclear LLC, (which holds the exclusive development of the EPR in the USA) and the rights to use its Calvert Cliffs, Nine Mile Point, and R.E. Ginna nuclear plants in order to build up to four standard EPRs in sites owned. UNE is governed by a ten-member Board of Directors, comprising a Chairman and four other members, all appointed by CEG, and five other members appointed by EDF.

Since its creation, UNE is devoted to the launching of EPR projects in the United States including the first project on the Calvert Cliffs site, with in particular:

- setting up and monitoring of files of authorization and license (including the license for the construction and operation);
- the implementation of a plan of technical actions with industrial partners AREVA and Bechtel, limited, pending the obtaining of permits and licenses, to the actions necessary to meet the objectives of planning of commissioning of units. These actions have brought on the reservation and supply of critical components from AREVA where bottlenecks have been identified, the signing of contracts with Alstom to booking a set of four turbines and studies of associated engineering, signing contracts for detailed engineering studies with the consortium AREVA/Bechtel and the launch of negotiations on the contract of EPC (Engineering, Procurement, Construction); and
- the start of negotiations for a financing guarantee from the US Federal Government (Federal Loan Guarantee Department of Energy) supplemented by a loan guarantee from Coface.

### 6.3.2.2.2 UNISTAR NUCLEAR ENERGY (UNE): MAJOR STAKES FOR THE DEVELOPMENT OF THE US EPR

UNE intends to develop a fleet of US EPRs with Calvert Cliffs 3 Project as lead plant.

The US EPR is based upon the design of the European EPR and takes account of the US codes and standards. It has similar performances in terms of safety features (four train redundancy for safety systems, core catcher in case of severe accident, airplane crash shell) net power output (1,600 MW) and availability or capacity factor.

The design is mainly performed by AREVA Inc. (nuclear island), Bechtel (turbine island, civil work and balance of plant) and Alstom (major components of the turbine hall).

UNE's efforts are focusing on the major stakes that are: project finance, licensing process, implementation of a robust industrial scheme and technical development of the project (see below).

As regards the licensing process, the major authorizations for construction and operation of the plant are the following:

- Design Certification of the US EPR. AREVA is responsible for the Design Certification of the US EPR. The current review of the Design Certification by the US NRC could lead to a Design Certification by 2012;
- Combined Operating and License Application ("COLA"), for construction and operation, to the NRC;
- State and Local Permitting. UNE is in charge of the Maryland State and local permitting including construction permit, certificate of public convenience and necessity, reject permit.

### 6.3.2.2.3 CALVERT CLIFFS 3 PROJECT

UNE's immediate focus is on a potential new Unit 3 at Constellation Energy Nuclear Group's Calvert Cliffs plant ("CC3").

The COLA for Calvert Cliffs 3 project has been formally accepted by the NRC for review at the beginning of June 2008.

As Licensee (owner and operator of the plant), UNE is in charge of the COLA. The current review process with the NRC could lead to a COLA approval for CC3 by mid 2012 which would allow a commercial operation date of the plant in the 4th quarter of 2017.

UNE is also pursuing all other activities consistently with this targeted commercial operation date, such as: Maryland State and local permitting, interconnection services agreement with the Pennsylvania-New Jersey-Maryland Interconnection (regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 States and the District of Columbia) to secure the necessary transmission capacity for the CC3 project.

**Financing**

UNE with CC3 as lead plant is competing to have a share of $18.5 billion in loan guarantees from the Department of Energy Loan Guarantee Program for advanced new nuclear plants, under the 2005 Energy Policy Act.

One of the goals of such Policy Act is to support the industry by allowing viable Project Finance schemes e.g. "limited recourse" for plants operating in regulated and deregulated markets, such as the PJM Interconnection market for CC3.

Department of Energy loan guarantee is considered for activities after COLA is granted and COFACE Loan Guarantee is considered for activities before and after COLA is granted.

Thus, and as regards financing of the project (and more specifically financing guarantees applied for), the situation is as follows:

- Coface: a "*Promesse de Garantie*" to cover part of the expenses related to components and/or services supplied by AREVA, Alstom and EDF for CC3 before the granting of the COLA was received on November 26, 2009. Discussions with Coface and potential lenders are ongoing as to the conditions for implementation of this "*Promesse*". Regarding the terms of the Coface guarantee for part of the components and services for CC3 during the period following the granting of the COLA, the discussions have started.
- US Department of Energy: the Department of Energy selected in February 2009 the CC3 project, amongst others, to enter a due diligence process for a possible loan guarantee attribution. The CC3 project was later selected with 3 other projects for further negotiations. Since October 2009, UNE has entered negotiations with Department of Energy on the loan guarantee financing framework. On December 4, 2009 UNE filed a "draft EPC Contract". This is not a commitment by any of the parties but provides the Department of Energy with the current status of negotiations with

AREVA and Bechtel. On December 11, 2009 UNE submitted an update of its application to the Department of Energy. The expected outcome of this process would lead to a conditional Loan Guarantee Commitment during the first half of 2010 and to a Loan Guarantee by the end of 2010, with Conditions precedent to be fulfilled.

**Permitting**

The CPCN (Certificate of Public Convenience and Necessity) was issued for the CC3 Project by the Public Service Commission of Maryland in June, 2009. It provides the bulk of the State and local Permits necessary to build the CC3 power plant.

In November 2009, UNE has filed a revision to this approved CPCN to update the Air Permit.

**Industrial Scheme to design and build the US EPR in Calvert Cliffs**

The currently contemplated industrial scheme for the CC3 Project is based upon the following major features:

- AREVA and Bechtel would act as a Consortium (scope of responsibilities described above in 6.3.2.2.2 ("Unistar Nuclear Energy (UNE): major stakes for the development of the US EPR"));
- UNE and Consortium would enter a turnkey engineering, procurement and construction contract;
- Consortium would be the Architect Engineer (EDF's responsibility in France and in the case of Flamanville 3).

*Detailed Design of the plant*

The Contract for Detailed Design Engineering of the US EPR (generic) and the CC3 project (specific) has been signed in September 2008. Beyond the engineering work in progress, an agreement was found in 2009 with the AREVA-Bechtel Consortium including on the following contractual items: Engineering scope book and target job hours for the detailed design, together with a performance incentive mechanism.

Engineering and procurement is also ongoing for a limited number of critical components (long lead material) of the Nuclear Island (such as: components of the reactor pressure vessel, steam generator) and of the Turbine Island (such as: rotor, high and intermediate pressure casing of the turbine), with AREVA and Alstom respectively.

*EPC Contract*

On June 15, 2009, UNE and the AREVA-Bechtel Power Consortium signed a Term Sheet outlining the terms and conditions for an Engineering, Procurement and Construction (EPC) contract for UNE's proposed Calvert Cliffs 3 nuclear energy facility.

#### 6.3.2.2.4 OTHER US EPR PROJECTS CONSIDERED IN UNE'S BUSINESS MODEL

**Nine Mile Point**

The COLA application for Nine Mile Point 3 project in Scriba (NY) was accepted for review by the NRC in December 2008.

The Nine Mile Point 3 Project was not selected by the US Department of Energy for a possible federal loan guarantee attribution, as the commercial operation date initially contemplated for the Project puts it de facto in a second wave for Department of Energy Loan Guarantee.

As UNE is now focusing on the CC3 Project and in light of the current pace and funding of the US Federal Loan Guarantee Program, UNE has intentionally and significantly slowed the pace of work on the proposed Nine Mile Point 3 project.

**PPL Project and Ameren Project**

The other US EPR Projects in which UNE is involved have also been significantly delayed:

- US EPR Project contemplated at Bell Bend, Pennsylvania: the Pennsylvania Power & Light (PPL) project has not been selected for federal loan guarantee by the US Department of Energy. PPL operates 2 nuclear power plants (Susquehanna 1&2, in Pennsylvania);
- US EPR Project contemplated in Callaway, Missouri: Ameren has announced in April 2009 that the company is suspending, for the time being, its efforts to build a new nuclear power plant in Missouri. Ameren operates one nuclear power plant (Callaway, in Missouri).

#### 6.3.2.2.5 NEW STRATEGIC PARTNERSHIP: THE SOUTHERN OHIO CLEAN ENERGY PARK ALLIANCE

In June 2009, Duke Energy, AREVA, UNE and USEC Inc. announced the formation of the Southern Ohio Clean Energy Park Alliance. The Alliance will pursue the proposed development of a Clean Energy Park project at the US Department of Energy's Portsmouth site in Piketon, Ohio. The Alliance will initially focus on performing an evaluation of the site as a potential location of a nuclear power plant with a US EPR.

As a member of the Alliance, UNE will provide certain services for the project, including licensing support.

Actual work within UNE will start as soon as the project gets financings. The project is looking for a loan guarantee from the US Department of Energy.

### 6.3.2.3 ACQUISITION OF 49.99% OF CEG'S NUCLEAR ASSETS

#### 6.3.2.3.1 CREATION OF A NEW JOINT-VENTURE WITH CEG

Pursuant to an agreement dated December 17, 2008, the EDF group completed the acquisition of a 49.99% ownership interest in the nuclear generation and operation business of CEG on November 6, 2009.

Prior to the completion of this transaction, the EDF group had made several investments to strengthen CEG's liquidity position:

- on December 17, 2008, the EDF group provided a $1 billion up-front cash investment in CEG in the form of nonconvertible cumulative preferred stock, which was redeemed and credited against the purchase price for the nuclear generation and operation business upon consummation of the transaction;
- the EDF group provided additional liquidity support to CEG through an asset put option pursuant to which CEG could, at its option, sell to the EDF group certain non-nuclear generation assets of CEG having an aggregate value of up to $2 billion (the "Put Option"). The Put Option will terminate on December 31, 2010 (see note 5.3 to the 2009 Consolidated Financial Statements).

#### 6.3.2.3.2 ORGANIZATION AND GOVERNANCE RULES OF CENG

In connection with the closing of the acquisition by the EDF group of a 49.99% ownership interest in CENG, the EDF group and CEG entered into an agreement dated November 6, 2009, which governs the operation of CENG (the "Operating Agreement").

Pursuant to the Operating Agreement, CENG is managed by a ten member Board of Directors. Each of CEG and EDF group have the right to appoint five directors, with CEG having the right to appoint the Chairman who holds a casting (deciding) vote on certain matters in the event of deadlock, including on any matter related to the safety, security and reliability of CENG's nuclear facilities, any decision relating to US regulatory strategy or the relationship with the Nuclear Regulatory Commission (the "NRC"), staffing of key executive officer positions of CENG, as well as on other matters that in view of US laws or regulations require or make it reasonably necessary to assure control by a US citizen.

In addition to the Chairman, the Chief Nuclear Officer and the Chief Executive Officer also are required to be US citizens.

EDF group has the right to appoint the Vice-Chairman of the CENG Board of Directors.

Pursuant to the Operating Agreement, the CENG Board of Directors have a standing audit and finance Committee, nuclear safety and operations Committee and governance and compensation Committee comprised of an equal number of CEG-appointed and EDF group-appointed directors.

The Operating Agreement sets forth the distribution rights of the CEG and EDF group entities.

Pursuant to the Operating Agreement and subject to certain exceptions and conditions, the parties may transfer their interests in CENG to a third party subject to the other non-affiliated party's right of first refusal[1].

### 6.3.2.3.3 OPERATIONS OF CENG (NUCLEAR GENERATION AND OPERATION BUSINESS)

CENG owns, operates, and maintains 3,839 MW of nuclear generating capacity, which consists of the Calvert Cliffs Nuclear Power Plant in Maryland, and Nine Mile Point Nuclear Station and R.E. Ginna Nuclear Power Plant in the State of New York.

Nuclear business is made in a predictable regulatory environment under the control of the Nuclear Regulatory Commission. Licenses are initially granted for 40 years of operation. They can be extended by additional 20-year periods, provided that the operators commit to adequate monitoring of the key components and structures of their plants. The stability of the regulatory framework provides reasonable guarantee for investors. All CEG units applied for the extension of their license from 40 to 60 years, and it was granted to all of them. In addition, all units, except Nine Mile Point 1, can also apply or have applied for power uprates (from 4.3 to 16.8%) in order to be allowed to increase the power of their reactor[2].

### 6.3.2.3.4 CENG'S NUCLEAR FLEET

**Capacity**

The following table describes the nuclear generating facilities:

| Plants | Location | Capacity (MW) | % owned | Capacity owned (MW) |
|---|---|---|---|---|
| Calvert Cliffs Unit 1 | Calvert CO. (Maryland) | 855 | 100 | 855 |
| Calvert Cliffs Unit 2 | Calvert CO. (Maryland) | 850 | 100 | 850 |
| Nine Mile Point Unit 1 | Scriba (New York) | 620 | 100 | 620 |
| Nine Mile Point Unit 2 | Scriba (New York) | 1,138 | 82 | 933 |
| RE. Ginna | Ontario, (New York) | 581 | 100 | 581 |
| **TOTAL** | | **4,044** | | **3,839** |

- **Calvert Cliffs:**

CENG owns 100% of Calvert Cliffs Unit 1 (855 MW) and Unit 2 (850 MW). Unit 1 entered service in 1974 and is licensed to operate until 2034. Unit 2 entered service in 1976 and is licensed to operate until 2036. Both units are pressurized water reactors.

- **Nine Mile Point:**

CENG owns 100% of Nine Mile Point Unit 1 (620 MW) and 82% of Unit 2 (933 MW of Unit 2's total 1,138 MW). The remaining 18% interest in Nine Mile Point Unit 2 is owned by the Long Island Power Authority (LIPA). Unit 1 entered service in 1969 and is licensed to operate until 2029. Unit 2 entered service in 1988 and is licensed to operate until 2046. Both units are two boiling water reactors.

- **Ginna:**

CENG owns 100% of the Ginna nuclear facility. Ginna consists of a 581 MW reactor that entered service in 1970 and is licensed to operate until 2029. Ginna is a pressurized water reactor.

**Output and technical performance**

***Output***

The output of nuclear facilities over the past three years is presented in the following table:

CENG's stations generated 32.2 TWh nuclear electricity in 2009.

| | Calvert Cliffs | | Nine Mile Point | | Ginna | | Total |
|---|---|---|---|---|---|---|---|
| | TWh | Capacity Factor* | TWh | Capacity Factor | TWh | Capacity Factor | TWh |
| 2009 | 14.5 | 96% | 13.1 | 97% | 4.6 | 91% | 32.2 |
| 2008 | 14.7 | 96% | 12.8 | 94% | 4.7 | 94% | 32.2 |
| 2007 | 14.3 | 94% | 12.3 | 90% | 4.9 | 98% | 31.5 |

** Capacity Factor definition: The ratio of the net electricity generated, for the time considered, to the energy that could have been generated at continuous full-power operation during the same period. (source: NRC Glossary).*

1 Source: CEG form 8-K, November 12, 2009.

2 Source: NRC – Pending Applications for Power Uprates et Approved applications for power uprates.

The output of these plants is administered by CEG trading affiliate, Constellation Energy Commodities Group (CCG) acting as agent for CENG. CCG manages the market interface with the relevant Independent System Operators' (PJM and NYISO).

CENG sells a significant portion of the output from Nine Mile Point Nuclear Station (Nine Mile Point) and R.E. Ginna Nuclear Plant (Ginna) under unit-specific power purchase agreements (the "Legacy Agreements") to the previous owners of these stations.

CENG has agreed to sell all available energy in excess of the Legacy Agreements from the three nuclear stations to CCG and EDF Trading North America through the end of 2014. Sales of this available energy are allocated 90% to CCG, 10% to EDF Trading North America through 2010, 87.5% to CCG, 12.5% to EDF Trading North America in 2011, 85% to CCG and 15% to EDF Trading North America from 2012 to 2014. The structure of the pricing for this available energy reflects the prices of the electricity wholesale market. This Purchase and Sale Agreement ("PSA") structure allows CENG to cover its position by swapping the day-ahead price exposure for a fixed price based on the prevailing forward power markets, with terms that allow to bring generation hedging ratios close to target as agreed by the CENG Board for the period 2010-2012.

- **Nine Mile Point:**

CENG sells 90% of its share of Nine Mile Point's output to the former owners of the plant at an average price of nearly $35 per MWh under Legacy Agreements that terminate between 2009 and 2011. Such agreements are unit contingent (if the output is not available because the plant is not operating, there is no requirement to provide output from other sources). The remaining 10% of CENG's share of Nine Mile Point's output is sold to CCG and EDF Trading North America.

After termination of the Legacy Agreements, a Revenue Sharing Agreement ("RSA") with the former owners of the plant will begin and continue through 2021. Under this agreement, which applies only to CENG's ownership percentage of Unit 2, 80% of the difference between the market price and a reference price defined in the RSA will be surrendered to the former owners of the plant.

Unit 2 is exclusively operated under an operating agreement with LIPA. LIPA is responsible for 18% of the operating costs (including decommissioning costs) and construction costs of Unit 2 and has representation on the Nine Mile Point Unit 2 management Committee, which provides certain oversight and review functions.

- **Ginna:**

CENG sells 90% of the plant's output and capacity to the former owner for 10 years ending in 2014 at an average price of $44 per MWh under a long-term unit-contingent power purchase agreement. The remaining output is sold to CCG and EDF Trading North America.

***Technical performance***

The capacity factor of CENG nuclear facilities over the past 5 years is presented in the following table:

| Capacity factor | Calvert Cliffs | Nine Mile Point | Ginna |
|---|---|---|---|
| 2009 | 96% | 97% | 91% |
| 2008 | 96% | 94% | 94% |
| 2007 | 94% | 90% | 98% |
| 2006 | 90% | 93% | 93% |
| 2005 | 97% | 93% | 93% |

CENG nuclear plants have had a capacity factor higher than 90% for the last 5 years. CENG's technical performance is the result of sustained efforts to reduce the duration of maintenance outages, based on best US engineering practices, and on the analysis of the criticality of components and spare parts considering safety and availability as well.

## 6.3.2.3.5 THE NUCLEAR FUEL

### Supply of nuclear fuel

The supply of fuel for nuclear generating stations includes the:
- purchase of uranium (concentrates and uranium hexafluoride);
- conversion of uranium concentrates to uranium hexafluoride;
- enrichment of uranium hexafluoride; and,
- fabrication of nuclear fuel assemblies.

CENG has commitments that provide for quantities of uranium, conversion, enrichment, and fabrication of fuel assemblies to substantially meet expected requirements for the next several years at Calvert Cliffs, Nine Mile Point, and Ginna nuclear generating facilities.

### Storage of Spent Nuclear Fuel – Federal Facilities

One of the issues associated with the operation and decommissioning of nuclear generating facilities is disposal of spent nuclear fuel. There are no facilities for the reprocessing or permanent disposal of spent nuclear fuel currently in operation in the United States, and the Nuclear Regulatory Commission (NRC) has not licensed any such facilities. The Nuclear Waste Policy Act of 1982 (NWPA) required the federal Government, through the Department of Energy (DOE), to develop a repository for the disposal of spent nuclear fuel and high-level radioactive waste.

As required by the NWPA, CENG is a party to contracts with the Department of Energy to provide for disposal of spent nuclear fuel from its nuclear generating plants. The NWPA and CENG's contracts with the Department of Energy require payments to the Department of Energy of one tenth of one cent (one mill) per kilowatt hour on nuclear electricity generated and sold to pay for the cost of long-term nuclear fuel storage and final disposal of spent nuclear fuel. Through November 6, 2009 CEG paid those fees into the Department of Energy's Nuclear Waste Fund. For the remainder of 2009, CENG has paid these fees for the Calvert Cliffs, Nine Mile Point and Ginna nuclear generating facilities. The NWPA and CENG's contracts with the Department of Energy required the Department of Energy to begin taking possession of spent nuclear fuel generated by nuclear generating units no later than January 31, 1998.

The Department of Energy has stated that it may not meet that obligation until 2020 at the earliest. This delay has required that CENG undertake additional actions and incur costs to provide on-site fuel storage at its nuclear generating facilities, including the installation of on-site dry fuel storage capacity as described in more detail below.

In 2004, complaints were filed against the federal Government in the United States Court of Federal Claims seeking to recover damages caused by the Department of Energy's failure to meet its contractual obligation to begin final disposing of spent nuclear fuel by January 31, 1998. These cases are currently stayed, pending litigation in other related cases. CEG is entitled to any funds received from the Department of Energy that reimburse any costs expended prior to the closing of the transaction with EDF group for the storage of spent nuclear fuel. Any other funds received from the Department of Energy representing the default by the Department of Energy shall belong to the CENG joint venture after the date of its creation, i.e., from November 6, 2009.

**Storage of spent nuclear fuel – On-site facilities**

Calvert Cliffs has a license from the NRC to operate an on-site independent spent fuel storage installation that expires in 2012. Sufficient storage capacity exists within the plant and currently installed independent spent fuel storage installation modules to be able to contain the full contents of the core until 2015. Efforts are currently under way to renew the independent spent fuel installation license and expand its capacity to accommodate operations through 2036.

Nine Mile Point and Ginna are developing independent spent fuel storage installations at each of those facilities, which are expected to be completed in 2012 and 2010, respectively. Nine Mile Point and Ginna have sufficient storage capacity within the plant until the expected completion of the on-site independent spent fuel storage installations.

**Cost for decommissioning nuclear facilities**

CENG is obligated to decommission its nuclear power plants after these plants cease operation. In accordance with NRC Regulations and relevant State requirements, CENG has established funds strictly dedicated to cover the cost of plants decommissioning. The decommissioning trust fund strategy is based on estimates of the costs to perform the decommissioning and the timing of incurring those costs. When developing estimates of future fund earnings, CENG considered the asset allocation investment strategy, rates of return earned historically, and current market conditions.

Decommissioning activities are currently projected to be staged through 2083. Any changes in the costs or timing of decommissioning activities, or changes in the fund earnings, could affect the adequacy of the funds to cover the decommissioning of the plants, and if there were to be a shortfall, additional funding would have to be provided.

Every two years, the NRC requires US nuclear power generation companies to report the status of the funds and provide reasonable assurance that funds will be available to decommission their sites. The NRC has accepted CENG's 2009 filing as providing reasonable financial assurance, and CENG's next NRC submittal is scheduled to be filed by March 2011.

The trust fund investments are reported at fair value in the Consolidated Balance Sheet. As of December 2009, the fair value was $1.24 billion.

#### 6.3.2.3.6 PENSION

As a result of the acquisition by the EDF group of a 49.99% ownership interest in CENG on November 6, 2009, benefit plan assets and obligations relating to CENG employees that previously participated in CEG's plans were transferred into new CENG plans. Nine Mile Point offers its own pension, postretirement, other postemployment, and employee savings plan benefits to its employees.

At December 31, 2009, qualified pension obligations were approximately $172.5 million greater than the fair value of plan assets (source: CENG). The Pension Protection Act requires that such obligations be fully funded by 2015. The performance of the capital markets will affect the value of the assets that are held in trust to satisfy future obligations under qualified pension plans.

### 6.3.2.4 EDF GROUP'S OTHER ACTIVITIES IN THE US

#### 6.3.2.4.1 EDF ÉNERGIES NOUVELLES IN NORTH AMERICA

The Group is also present in the United States through EDF Énergies Nouvelles' wholly owned subsidiary EnXco, a renewable independent power producer. EnXco owns more than 971 MW (as of December 31, 2009) of wind and solar capacity across North America and provides wind operating and maintenance services on behalf of third-parties (4.7 GW under contract as of December 31, 2009) (see section 6.4.1.1.2 ("EDF Énergies Nouvelles").

#### 6.3.2.4.2 EDF TRADING NORTH AMERICA

The integration and development of the trading company EDF Trading North America (formerly Eagle Energy Partners) is presented in section 6.2.1.3.3.7 ("Development of EDF Trading activities Overseas").

#### 6.3.2.4.3 COOPERATION WITH EXELON

EDF and Exelon, the first US nuclear operator, have signed on April 21, 2008, a memorandum of understanding relating to cooperation for a period of five years. Under this memorandum of agreement, EDF and Exelon will exchange and share their experiences of being a nuclear operator.

#### 6.3.2.4.4 RESEARCH DEVELOPMENT ACTIVITIES IN THE US

The US has one of the largest and most dynamic R&D in the world. With a total budget of $397.6 billion in 2008[1], this R&D relies on about 1.3 million researchers[2]. It is funded by industry ($267.8 billion), federal Government ($103.7 billion) with the remaining part being shared between universities, non profit organizations, non federal Government agencies, etc.

An important and growing area addressed by the US R&D is energy, with a threefold objective of protection of environment, security of supply and independence. This effort is supported by the current legislation (American Recovery and Reinvestment Act) that allocated a budget of $36.7 billion to the Department of Energy in 2009[3] ($5.8 billion[1] in 2007[4]). As far as electricity is concerned, the Electric Power Research Institute (EPRI), a non profit organization, is one of the R&D key players. It provides technologies, policies and economic analyses to its funding members, which represent in the United Sates more than 90% of the electricity generated. Its international membership extends to 40 countries[5].

In order to harness this strong potential, EDF has seconded for many years a R&D team in the US. This team is composed of 4 to 6 persons and is located in the EPRI premises in Palo Alto, California and Charlotte, North Carolina. Its primary objective is to maximize the quality of the collaboration between EDF and this institute. The EDF/EPRI collaboration covers multiple areas such as nuclear and renewable energies, smart grids, energy efficiency, carbon capture and sequestration, etc.

1 NSF 10-312, National Science Foundation, January 2010-Preliminary figures.

2 OCDE sources.

3 www.doe.gov.

4 NSF 09-320, National Science Foundation, September 2009.

5 EPRI, January 2009.

The EDF R&D team in the US is also in charge of setting up collaborations between EDF and US research organizations (universities, National Laboratories, industry, etc.) selected for their expertise or facilities. For instance, collaborations were set up with the MIT, the Texas A&M University, IBM, etc. Being located in the Silicon Valley, a part of this team can also work in real-time with some of the most innovative companies and universities in the world.

#### 6.3.2.4.5 INNOVATION SOURCING & TRANSFER ACTIVITIES IN THE US

The energy industry in the US is benefiting from various supporting schemes defined in the American Recovery and Reinvestment Act and other pieces of legislation. Innovation is a key focus for the current Administration in order to increase US competitiveness in clean energy technologies. Several innovation hubs and public-private partnerships funding schemes are currently available to move towards a more efficient energy system in the US.

EDF decided to launch an innovation sourcing and transfer activity in the US, with the kick off in early 2010 in the Silicon Valley. The objective is to provide the EDF group with new technologies, products or business opportunities. The added-value of the selected innovations should typically be demonstrated within a one-year time period. If successful, this should then be deployed within the concerned business unit(s) in the next 2 to 5 years.

The EDF Innovation team complements the 2 other teams dedicated to innovation for the EDF group in Asia and Europe.

## 6.3.3 Asia/Pacific

The EDF group's activities managed by the Asia-Pacific Division mainly focus on China and the Mekong Delta, both significant growth areas.

Investments in the power production field in Asia and in particular in China are one of the EDF group's major industrial stakes. The Group is investing in EPR power plants and other projects in the region that will give it access to state-of-the-art technology, as well as promote its industrial expertise, particularly in the nuclear area. This will give EDF competitive and technological advantages in the global arena, as it works to launch a new global nuclear program, penetrate the booming emerging markets for equipment, and shore-up its power generation fleet in France.

### 6.3.3.1 THE EDF GROUP'S ACTIVITIES IN CHINA

The EDF group has been operating in China for the past 20 years through advising companies on nuclear, fired and hydropower technologies. Today it is one of the country's largest foreign investors in terms of power generation, with its investments in coal-fired plants that have a total installed capacity of 4,916 MW (i.e., 1,676 MW in equity). In 2009, EDF has also become investor in a project to generate electricity from a EPR nuclear power plant in China with the Taishan project Phase I (2 x 1,700 MW). EDF has also formed partnerships offering new investment opportunities for nuclear and the more technologically advanced coal-fired facilities, as well as hydropower systems and renewable energy, including wind power.

#### NUCLEAR POWER GENERATION ACTIVITIES

- **Daya Bay and Ling Ao**

EDF directed the design, construction and commissioning of two 1,000 MW nuclear reactors in 1994, then helped the owner of the Chinese group China Guangdong Nuclear Power Holding Co., Ltd. ("CGNPC") for the construction of two units of the Phase I plant at Ling Ao (2 x 1,000 MW), put into service in 2002 and 2003. EDF now assists the owner with the operation of these facilities. The high level of performance achieved by these nuclear plants illustrates the company's solid know-how in China.

EDF is currently helping one of GCNPC's subsidiaries, China Nuclear Power Engineering Company Ltd. ("CNPEC"), with Phase II of the Ling Ao project, which consists of building two additional 1,000 MW units on the site for commissioning in 2010.

- **First agreement signed for a foreign investor in China in nuclear power generation**

Following the industrial partnership announced in October 2006, EDF and the Chinese electricity producer CGNPC signed on August 10, 2008, in Beijing, the final agreements, followed by an *addenddum* signed on November 27, 2009, for the creation of a joint venture company to be called Taishan Nuclear Power Joint Venture Company Limited ("TNPJVC"). The aim of the joint venture is to construct and operate two nuclear EPR reactors at Taishan in the province of Guangdong and to sell the electricity generated by the plant.

EDF will hold 30% of TNPC for a period of 50 years, which is the current maximum permitted for a joint venture in the nuclear in China. The Group becomes for the first time an investor of nuclear reactors in this country.

Preliminary work at the Taishan phase 1 site started in late 2007. Contracts have been signed with AREVA and Alstom for the supply of respectively the nuclear and the turbine equipments. After approval of the project by the Chinese Government in October 2009, the construction of the nuclear island of the Taishan power plant started with the concrete pouring, less than two years after the one at Flamanville 3. The first unit should be commissioned at the end of 2013 and the second in 2014. At the height of construction work, over sixty EDF experts should be within the joint venture or on-site at Taishan. The success of the project will hinge on the complementarity between groups EDF's and CGNPC's skills.

At the same time as creating the joint venture, the two groups also concluded a technical assistance contract under which EDF will share its knowhow by seconding skilled personnel and providing technical documentation. CGNPC is China's leading nuclear operator and will, for its part, bring its experience as an owner and an operator at Daya Bay and Ling Ao. It will also bring its knowledge of the nuclear electricity sector and of the industrial network of China to the partnership.

The creation of this joint venture company, whose corporate documents were approved by the Chinese Ministry of Trade ("MOFCOM") on December 11, 2009, reinforces the productive cooperation that EDF has enjoyed with China and CGNPC for over 20 years. As part of a global cooperation agreement signed in 2007, EDF and CGNPC will also examine the opportunities for joint development projects in China and at an international level.

#### COAL-FIRED POWER GENERATION ACTIVITIES

EDF has been present for over 11 years in the generation of of coal-fired power in China.

- **Figlec and Synergie**

As of December 31, 2009, EDF wholly owned French Investment Guangxi Laibin Electric Power Company, Ltd. (Figlec), the company which owns the Laibin B power plant (656 MW of net power available) and 85% of Synergie, the company responsible for operating and maintaining Laibin B. The remaining 15% of Synergie is owned by Chinese partners. Laibin B was

commissioned in November 2000 as part of a build, operate, and transfer (BOT) project, and will be transferred to the Guangxi Government in 2015.

**• Shandong Zhonghua Power Company Ltd. ("SZPC")**

As of December 31, 2009, EDF held a 19.6% stake in Shandong Zhonghua Power Company (SZPC), which owns three coal-fired power plants with a total capacity of 3,060 MW. SZPC's other owners are two Chinese companies and CLP of Hong Kong. SZPC's plants were commissioned between 1987 and 2004, and will be gradually transferred to the Chinese partners between 2020 and 2028.

**• Datang Sanmenxia Power Generation Company ("DSPC")**

Early April 2009, the Chinese Ministry of Trade ("MOFCOM") approved the transaction which allows EDF to hold a 35% interest, along with Datang, in DSPC, the company that owns the Sanmenxia plant in the Province of Henan, which was put into service in 2007 and has an installed capacity of 1,200 MW ("supercritical coal technology"). This equity investment is made through a joint venture whose life has been set until 2039 by the Chinese authorities. The company's new license (Business Licence) was issued June 26, 2009 by the Administration of Industry and Trade. Datang group is the majority shareholder in DSPC. Another Chinese partner holds a 5% stake in DSPC.

**• New projects**

The Group has initiated discussions with Chinese operators of power generation (Genco or Generation Company) for possible investments in new coal-fired power plants using "supercritical" or "ultra supercritical" technology.

#### NATURAL GAS OPERATIONS

**• Buget**

As of December 31, 2009, EDF held a 20% stake in Buget, a design, construction, and consulting firm specialized in natural gas distribution. Buget's other owners are GDF SUEZ, with a 20% stake, and Chinese partners.

#### HYDROPOWER GENERATION

EDF has been involved in hydropower technology since 1985, and its engineering skills and consulting services are recognized in the industry. In fact, EDF has helped develop several hydropower facilities in China.

#### OTHER BUSINESSES AND PROSPECTS

EDF and its Chinese partners are looking into possible investments in the wind energy sector, following the new law on renewable energies passed in China in early 2006.

In the area of power transmission and distribution, EDF has won several consulting contracts.

### 6.3.3.2 THE EDF GROUP'S ACTIVITIES IN SOUTH ASIA

The EDF group's businesses in south Asia are focused on developing its electricity business in the Mekong Delta region, where Thailand and Vietnam are the primary growth drivers. This region offers opportunities for independent power plant (IPP) projects, such as Phu My 2.2 in Vietnam and Nam Theun 2 in Laos. Thus, EDF is studying possible partnerships for designing, building, and operating new fossil fuel, hydropower, and, for the long-term, nuclear power plants.

#### 6.3.3.2.1 VIETNAM

As of today, EDF held a 56.250% stake in Mekong Energy Company Ltd. (MECO), the owner of the Phu My 2.2 combined-cycle gas turbine plant. Phu My 2.2 has a generation capacity of 715 MW and was commissioned in 2005. It is the first independent power plant (IPP) project financed exclusively by foreign investors in Vietnam. MECO's other owners are international subsidiaries of Sumitomo Corporation (28.125%) and Tokyo Electric Power Corporation, Inc (Tepco) (15.625%), both Japanese companies. Phu My 2.2 was developed under a 20-year Built, Operate, and Transfer (BOT) contract; EDF built the turnkey plant and MECO operates it.

In order to meet the need for new-generation plants, EDF has contacted the Vietnamese Government about potentially building advanced technology coal-fired and natural gas facilities.

EDF is a member of a pre-qualified consortium, as part of a tender call for a coal power plant project of 2 x 600 MW and is participating with a Vietnamese partner and a foreign partner in a study of the feasibility of another project with similar characteristics.

#### 6.3.3.2.2 LAOS

To date, EDF holds 35% of Nam Theun 2 Power Company ("NTPC"). NTPC owns the 1,070 MW of installed capacity Nam Theun 2 hydropower complex. NTPC's other owners are two companies from Thailand EGCO (Energy Generating Company) 25%, ITD (Italian-Thai Development Company) 15% and one from Laos LHSE (Lao Holding State Enterprise) 25%. EDF is also owner of the"turnkey" contract of completion of works. EDF will operate the plant for 25 years through its stake in NTPC and under a concession contract concluded with the Government of Laos. Thailand will purchase most of the electricity generated (around 95%); the balance for the Laos (5%).

To date, the main works are completed and the reservoir was filled for the second time during the rainy season in 2009. The tests performed at full power in late 2009 were satisfactory. The commercial operation with the Electricity Generating Authority of Thailand ("EGAT"), the Thai electrician, of four groups of "Francis" type (4 x 250 MW) started in March 2010. The commercial commissioning of the entire hydroelectric complex is currently scheduled for mid-2010.

The social and environmental measures provided by the concession contract are largely implemented. At the beginning of 2008, several months before flooding of the reservoir, the villagers had joined their homes in the new villages along the reservoir. The second rice crop, in fields cleared in 2008, took place in October 2009. Fishing on the reservoir and the activities of the mill (Village Forestry Association) contribute to improving incomes of resettled villagers. The project company is also implementing the environmental and social measures designed to minimize the potential impacts of restitution of downstream turbine flow of the hydroelectric plant.

Particular attention is paid to monitoring water quality in the reservoir and downstream. To this end, EDF has put up with the project company a laboratory analysis of water quality of the reservoir. Furthermore, a weir in the downstream channel contributes to the oxygenation of turbine flow.

#### 6.3.3.2.3 THAILAND

At the end of 2009, EDF completed its advisory services for MEA (a Bangkok transmission and distribution company) relating to the construction of a substation and underground cable connections in metropolitan Bangkok.

## 6.3.4 Latin America

In Latin America, the EDF group currently operates only in the Brazilian market following the completion in 2008 of its strategy of withdrawing from the companies located in Argentina and Mexico in which it had shareholdings.

### 6.3.4.1 Brazil

With a focus on long-term positioning, EDF signed a five-year cooperation agreement with Brazilian companies Eletrobras and Eletronuclear on December 23, 2008, in the areas of hydropower and nuclear energy. The agreement sets the conditions for the joint conduct of feasibility studies for a new hydroelectric project in the state of Para in Brazil (a complex of five hydroelectric facilities on the river Tapojos, in Amazonia, with a total capacity of 10,682 MW), and the sharing of experience and best practice for the roll-out of the new Brazilian electronuclear program.

On July 17, 2009, a technical cooperation agreement was signed in Paris between EDF, Eletrobras, Eletronorte and Camargo Correa. The agreement sets forth the activities involved in technical, economic and environmental feasibility studies for the hydroelectric complex in Tapajos. Specifically, it establishes the organization and division of roles and responsibilities between the parties and the schedule for each of the five facilities, up until the receipt of preliminary licenses prior to public auctioning.

#### 6.3.4.1.1 LIGHT

On July 17, 2009, the EDF group sold its entire remaining stake in the company Light for Brazilian Real 321 million (€116 million).

#### 6.3.4.1.2 UTE NORTE-FLUMINENSE

The EDF group owns 90% of UTE Norte-Fluminense, the company which built and operates since 2004 the combined-cycle gas turbine at Norte-Fluminense in the State of Rio de Janeiro. This power plant has a capacity of 869 MW. Norte-Fluminense sells 725 MW to Light under a Power Purchase Agreement (PPA) for a period of 20 years. The balance is sold on the open electricity market. UTE Norte-Fluminense sold 6,409 GWh in 2009.

## 6.3.5 Africa

In Africa, the Group currently operates only in the Ivory Coast power generation market and through decentralized services companies of Mission Access to Energy.

### 6.3.5.1 IVORY COAST

As of December 31, 2009, EDF indirectly holds 32.85% of the owner company (Azito Énergie) and directly holds 50% of the operating company for the Azito power plant (Azito O&M SA). Located near Abidjan, the power plant, with a capacity of 289 MW, is comprised of two gas turbines, fueled by natural gas from the Ivory Coast itself. Azito Énergie has operated the plant since 1999 and holds a concession granted by the Ivory Coast Government until 2022. It supplied to the net energy network 2,088 GWh of electricity in 2009. All generation is sold back to the national Ivory Coast operator.

### 6.3.5.2 SOUTH AFRICA

Due to the robust growth outlook for the South African economy, the South African Government plans to double the country's installed power generation capacity (from 44 GW to 80 GW) by 2030, with a significant portion of the increase coming from nuclear power. Following a consultation on the supply of 3,500 MW nuclear, the national electricity company Eskom announced, in late 2008, that the tender had been unsuccessful due to the size of the investment against a backdrop of economic and financial crisis. Since then, the project has been passed back to the authority of the South African Government, which remains committed to the use of nuclear power in its future energy mix.

### 6.3.5.3 ACCESS TO ENERGY MISSION

Since 2001, EDF has been developing a program to provide access to energy in developing countries. The program operates by setting up small energy service companies that supply families and small businesses located in rural areas far from power grids in Morocco, Mali and South Africa. As of end-2009, around 310,000 people benefited from the energy services provided by these companies.

In all of these operations, EDF acts in partnership with other industrial players such as Total or Nuon and systematically seeks to include local players capable of taking over when conditions for profitable and durable operation are met.

In South Africa, EDF currently owns a 50% interest in KES (Kwazulu Energy Services). In June 2009, a new local operator Calulo acquired 15% of the capital of KES. The remaining 35% is owned by Total. Created in 2002, KES serves nearly 45,000 people in KwaZulu-Natal using photovoltaic kits. Since 2007, KES has extended its business to the Eastern Cape and aims to serve approximately 250,000 people in 2012 (13,000 at end-2009) in the two provinces.

In Mali, EDF's 70% stake in Korayé Kurumba (KK) was sold on July 6, 2009 to a GIE called "Gole Kanu", formed by the employees of the company. EDF signed a cooperation contract with KK under which EDF will provide support in the form of technical, administrative and training consultancy.

In Morocco, Temasol (a company owned by EDF and Total via their common subsidiary Tenesol), serves over 186,000 people using photovoltaic kits.

# 6.4 Other activities and transverse functions

## 6.4.1 Other activities

### 6.4.1.1 NEW ENERGIES

The development of renewable energy sources has become a reality, principally in Asia (China), Europe and in the United States. In 2009, 38,000 MW of wind power were installed worldwide, of which around 13,000 MW in China, 10,500 MW in Europe and 9,900 MW in the United States. In Europe, the installed capacity of wind power in Spain, Germany, Italy and France in 2009 was 2,459 MW, 1,917 MW, 1,114 MW and 1,088 MW respectively. The combined installed capacity of wind power worldwide is now almost 158,000 MW, of which over 76,000 MW in Europe, more than 35,000 MW in the United States and around 39,000 MW in Asia[1].

Wind power, biomass and solar power are by far the biggest areas of development at present since hydropower has reached saturation in many countries.

The EDF group is the European leader in renewable energies, as a result of its hydropower. The EDF group's ambition is to develop all forms of renewable energy, giving priority to wind and solar power generation. EDF also intends to favor the emergence of new technologies in conjunction with R&D. This process is in line with the Group's sustainable development policy (see section 6.4.3.2 ("Environmental policy")). Finally, EDF promotes the development of energy generation at the point of consumption including photovoltaic energy, heat pumps and wood.

#### 6.4.1.1.1 DESCRIPTION OF NEW ENERGIES

**Wind power**

The wind turbine or aero-generator is a wind sensor, where the force of the wind drives rotor blades attached to an electrical generator. A distinction can be made between:

***– Onshore wind power***

This is a mature sector with wind turbines in the range of 2 to 3 MW. For one MW of installed capacity, average annual electricity generation can vary from 2 to 3 GWh, depending on the quality of the site and the type of machines used.

Wind power growth has been driven particularly strongly by incentive economic measures in the majority of countries. The main vehicle for the development of the EDF group's wind power is EDF Énergies Nouvelles, which can rely on EDF's Research and Development Division for technical monitoring and expertise.

The subsidiaries EDF Energy, EnBW and Edison also have wind farms in operation and projects in development.

The group EDF' production of electricity from wind power reached 4,757 GWh in 2009, including 4,255 GWh for EDF Énergies Nouvelles.

***– Offshore wind power***

Offshore wind farms, while considered a new area for development, are nevertheless far costlier in terms of investment, harder to operate/maintain and more expensive to connect to the grid. On the other hand, producible power is greater owing to steadier winds (1MW of installed capacity produces 3 to 4 GWh) and power per unit may be higher (3 to 5 MW). This is an emerging sector, in which the EDF group has invested in small-scale wind farms in order to grow its competencies: the first six turbines of the C-Power wind farm in Belgium (developed with EDF Énergies Nouvelles) are now operational and the Baltic One wind farm in the Baltic Sea (currently being built in partnership with EnBW).

**Solar power**

Photovoltaic solar power (electricity generation) is not the same as thermal solar power (heat production).

2009 has seen rapid growth in the French photovoltaic market, with installed capacity increasing from 105 to 250 MW. Consequently, France has moved from twelfth to seventh position in world ranking in terms of installed capacity (source: 2nd PriceWaterhouseCoopers report on the state of the photovoltaic industry in France).

EDF's subsidiary, EDF Énergies Nouvelles, focuses EDF group's development strategy in the area of new energies. For centralized generation, the subsidiary had 220 MWc in service or under construction at December 31, 2009, significantly ahead of the target of 100 to 150 MWc gross set by the company at the beginning of 2009. EDF Énergies Nouvelles has set itself the target of achieving a net installed capacity of 500 MWc in photovoltaic energy by 2012. It operates via the subsidiary of EDF Énergies Nouvelles, EDF Énergies Nouvelles Réparties (50% EDF Énergies Nouvelles, 50% EDF), for all products involved in the construction industry (photovoltaic roof panels, thermal solar power, heat pumps and wood biomass energy).

EDF offers solutions using renewable energy sources to private, industrial and local authority customers. The objective is to position itself for future growth, through integrated residential, service sector and local authority packages based on photovoltaic cells, thermal solar power, heat pumps and wood energy.

**Geothermal energy**

The temperature of the rocks in the earth's crust increases with depth: on average, 3 degrees Celsius every 100 meters. In some regions of the globe, the earth's heat reaches the surface as heat sources, water or steam. Hot water is exploited directly as heat: central heating in dwellings or greenhouse heating. Steam extracted from beneath the ground is used in the generation of electricity: it drives a turbine as it does in an oil-fired and coal-fired power plant. It is also possible to use hot and dry rocks as a source of energy. Water is circulated between two wells bored into the ground: water poured into one of the wells is heated as it passes into the dry rocks and emerges as steam ("Enthalpy"). EDF is a partner in a European Grouping which develops and operates a prototype unit of geothermic electricity generation in hot broken crystal rocks in Soultz (Alsace).

1 Source: Global Wind Energy Council.

There are also high temperature resources in France's Overseas departments. The EDF group is present in this activity notably through its shareholding in the company Géothermie Bouillante (30% owned) in Guadeloupe.

**Biomass**

Technologies based on biomass mainly consist of burning certain waste, in particular from the timber and farming industries, to produce heat or electricity.

Thus, in addition to hydropower, wind power and geothermal, biomass can also contribute to the objective of developing renewable energy sources.

Through its holdings, notably in Dalkia, the EDF group owns shares in France and abroad in several dozen heating systems and small size generating facilities which are mainly fueled with wood.

EDF Énergies Nouvelles holds through its wholly owned subsidiary SIIF Energy Iberica, in partnership with Hermanos Santa Maria (a producer of olive oil), a plant of 26 MW located in Lucena (Andalucia).

**Other technologies**

In anticipation of, and positioning itself for, new technological solutions, the EDF group devotes significant resources to Research & Development areas which may prove to be vehicles for growth in the medium term: tidal energy (submarine turbines using the energy in marine currents) and biomass gasification, as well as areas that have already been discussed (thin film photovoltaic cells, deep geothermal).

In October 2008, EDF group has appointed Irish company OpenHydro Group Ltd. to build the first underwater tidal turbines at Paimpol-Bréhat (Côtes d'Armor) as part of its pilot project to build a tidal turbine farm to generate electricity from tidal energy. The OpenHydro partnership concerns the installation of 4 to 6 tidal turbines with a total capacity of between 2 MW and 3 MW. These will be connected to the electricity grid from 2011 onwards. Fully submerged and easy to move, the turbines can be raised for maintenance operations. The test unit at Paimpol-Bréhat will enable the technology to be tested in real-life conditions and allow its impact on the marine environment to be assessed in detail during various studies. The Paimpol-Bréhat region, which has some of the most powerful tidal currents in France, could in future accommodate other test technologies piloted by EDF. This project illustrates EDF group's commitment to developing marine energy, as well as its ambition to acquire expertise and develop this industry by 2020, notably alongside IFREMER, the French research Institute for the exploitation of the sea.

### 6.4.1.1.2 EDF ÉNERGIES NOUVELLES

The EDF group's commitment to renewable energy sources is undertaken mainly by EDF Énergies Nouvelles, whose goal is to achieve a net installed capacity of 4,200 MW at the end of 2012, including 500 MWc of photovoltaic solar energy.

**EDF Énergies Nouvelles shareholding**

EDF Énergies Nouvelles initial public offering took place in November 2006. Its shares were listed on Nyse Euronext Paris on November 28, 2006. Following the initial public offering, the share capital of EDF Énergies Nouvelles breaks down as follows: 50% is held by EDF, 25.1% by the Mouratoglou group and 24.9% by the public (including employees).

In order to organize their relationship following the initial public offering of EDF Énergies Nouvelles, the EDF group and the Mouratoglou group entered into a shareholders' agreement in July 2006 that defines the EDF Énergies Nouvelles company project, determines the allocation of the company's Board of Directors seats, and sets corporate governance rules and liabilities related to the transfer by Pâris Mouratoglou and SIIF Luxembourg (the "Mouratoglou Group") of all or part of their shares of EDF Énergies Nouvelles.

Under the terms and conditions of the shareholders' agreement, the EDF group has a preemptive right if the Mouratoglou Group transfers part or all of its ownership to an identified third party. Moreover, if the Mouratoglou group holds less then 10% of the share capital of EDF Énergies Nouvelles (following the initial public offering), the shareholders' agreement provides that the Mouratoglou group can require the EDF group to purchase the remaining shares through a put option. Similarly, if the Mouratoglou group does not exercise the put option, the EDF group may require the Mouratoglou group to sell its remaining shareholding in EDF Énergies Nouvelles to the EDF group through a call option. Finally, the Mouratoglou group committed himself, under the shareholders' agreement, not to carry out any business, directly or indirectly through a subsidiary, that could be in competition with the business of EDF Énergies Nouvelles and its subsidiaries, in French territories or in any country where the company conducts or will conduct business.

Due to the existence of this shareholders' agreement, the EDF and Mouratoglou Groups have filed a declaration with the AMF on November 13, 2006, stating that they were acting in concert with respect to EDF Énergies Nouvelles.

On September 3, 2008, EDF Énergies Nouvelles launched a capital increase with preferential subscription rights to existing shareholders for an amount of €500 million to finance its expansion in the solar photovoltaic segment. The Company's main shareholders, the EDF group and Mouratoglou group, have committed to subscribe to the capital increase prorata their shareholding, which represents a total of 75.1% of the share capital. Thus at the end of the transaction, the shareholding structure of EDF Énergies Nouvelles remains unchanged: 50% owned by EDF, 25.1% owned by the Mouratoglou group and 24.9% in the public (including employees). The transaction resulted in the issuance of 15,513,683 new shares.

**EDF Énergies Nouvelles activities**

EDF Énergies Nouvelles carries out several activities:

- development, construction and operation of electricity generation assets, from renewable energy sources;
- sales to third parties of electricity generation assets based on renewable energy sources which it has developed and built; and
- operation and maintenance of wind farms on behalf of third parties and on its own behalf, mainly in the United States.

EDF Énergies Nouvelles is present in European countries that have a strong development potential for renewable sources of energy, especially wind power (France, Portugal, Greece, the United Kingdom, Italy and Turkey), as well as in the United States, Canada and Mexico. EDF Énergies Nouvelles also carries out activities in Belgium, Spain, Germany and Bulgaria.

The following table sets forth the breakdown of the installed capacity of EDF Énergies Nouvelles, by subsidiary and by country, as of December 31, 2009.

| (Installed capacity in MW at December 31, 2009) | Gross[1] | Net[2] |
|---|---|---|
| **WIND POWER** | | |
| France | 368.4 | 324.8 |
| Portugal | 495.8 | 302.9 |
| Greece | 187.4 | 165.3 |
| Italy | 291.4 | 138.4 |
| UK | 177.2 | 138.2 |
| Turkey | 94.0 | 34.7 |
| Belgium | 30.0 | 5.5 |
| Germany | 3.0 | 3.0 |
| US | 965.3 | 882.3 |
| Mexico | 37.5 | 37.5 |
| **TOTAL WIND POWER** | **2,650.0** | **2,032.6** |
| **SOLAR** | | |
| Italy | 18.9 | 11.6 |
| France | 25.9 | 25.9 |
| Spain | 6.7 | 1.3 |
| US | 6.0 | 6.0 |
| Canada | 23.4 | 23.4 |
| **TOTAL SOLAR** | **80.9** | **68.2** |
| **Other Industries** | 214.5 | 156.2 |
| **TOTAL** | **2,945.4** | **2,257.0** |

*(1) Gross capacity: Total capacity of the facilities in which EDF Énergies Nouvelles has a stake.*

*(2) Net capacity: Capacity corresponding to EDF Énergies Nouvelles' stake.*

EDF Énergies Nouvelles has made solar photovoltaic power its second area of growth behind wind power (with 80.9 MWc gross installed at December 31, 2009). The company also operates in small scale hydro power (with 128.4 MW gross installed at December 31, 2009) and biomass with 26 MW gross installed at December 31, 2009, as well as biogas (3 MW gross installed at December 31, 2009). As part of its traditional business, EDF Énergies Nouvelles also operates fossil fuel and cogeneration power plants (57.1 MW gross installed at December 31, 2009).

EDF Énergies Nouvelles had 2,439 employees (including EDF Énergies Nouvelles Réparties) at December 31, 2009.

### *Developments in Wind Power*

During 2009, EDF Énergies Nouvelles continued to pursue its development in wind power, its primary area of growth.

Accordingly, EDF Énergies Nouvelles increased production capacity by 619.4 MW during 2009, reaching a total of 2,650 MW gross wind energy at December 31, 2009. The commissioning of wind farms[1] has mainly occurred in the United States (252.6 MW), Mexico (37.5 MW), France (105 MW), Italy (57.3 MW), Turkey (45 MW), Greece (38 MW), the United Kingdom (34 MW) and Belgium (30 MW).

In France, EDF Énergies Nouvelles commissioned wind farms in Bassin de Thau (26 MW), Canton de Bonneval (24 MW), Sauveterre (12 MW), Les Barthes (12 MW), Fiennes (11.5 MW), Castanet (11.5 MW) and Veulette (8 MW). In Greece, the Group commissioned the Viotia 2 wind farm (38 MW). In Italy, the Minervino wind farm (32 MW) and the first tranche in the Monte Grighine wind farm (25.3 MW out of a total of 98.9 MW) have been put into service. In the United Kingdom, the Long Park wind farm (38 MW) has been commissioned. EDF Énergies Nouvelles also commissioned the first tranche of the C-Power offshore wind farm (30 MW) in Belgium. In Turkey, the Group commissioned the first tranche of the Soma 1 wind farm (45 MW out of a total of 79.2 MW). In the United States, the Group commissioned two large scale wind farms: Shiloh II (150 MW) and Hoosier (106 MW). Finally, the first tranche of the La Ventosa wind farm (37.5 MW out of a total of 67.5 MW) has been commissioned in Mexico.

As of December 31, 2009, EDF Énergies Nouvelles had a total of 713.4 MW under construction (of which 365.2 MW net capacity) and a portfolio of wind projects amounting to a total of 13,860 MW.

In terms of its Development and Sale of Structured Assets business, EDF Énergies Nouvelles has finalized the sale of the Fierville wind farm (28 MW) in France as well as part of the Spearville project (48 MW) and the Crane Creek wind farm (99 MW) in the United States. At December 31, 2009, EnXco, the US subsidiary of EDF Énergies Nouvelles, had signed contracts worth 401 MW with US energy companies for the delivery of wind farms in 2010 and 2011.

EDF Énergies Nouvelles continued to pursue its own supply of wind turbines by signing an agreement in March 2009 with Skypower, the Canadian renewable energy developer, to purchase 270 MW of GE turbines for delivery in 2009 as well as an agreement for the supply of 74 MW of Vestas turbines to the Bonorva wind farm in Sardinia. EDF Énergies Nouvelles also signed two contracts with REPower at the end of 2009. The first contract covers the purchase of 954 MW of turbines which will be used for 5 wind farm projects currently under construction in Canada. The second contract, signed by EnXco, covers the purchase of 143.5[2] MW of turbines which will be used for a wind project on the West Coast of the United States. In total, as of December 31, 2009, 2,523 MW of turbines are secured.

1 Net capacity.

2 Subject to conditions regarding the completion of the project.

As part of its international development, EDF Énergies Nouvelles signed a strategic agreement with Greentech, the Danish wind farm developer, in May 2009. The agreement covers the acquisition of 50% of the Italian wind project at Monte Grighine (98.9 MW) and establishes a partnership giving EDF Énergies Nouvelles the option to take a 50% stake in every project in Greentech's portfolio in Italy and Poland, representing approximately 850 MW.

***Development of the solar photovoltaic industry***

EDF Énergies Nouvelles has continued to develop the solar photovoltaic market, its second priority area of growth. In 2009, the installed solar capacity increased to 80.9 MWc gross with projects in Italy (18.9 MWc), France (25.9 MWc), Spain (6.7 MWc), Canada (23.4 MWc) and the United States (6 MWc). At December 31, 2009, the Group had a total of 138.8 MWc gross capacity under construction.

EDF Énergies Nouvelles continued to pursue the supply of solar panels. The supply agreement with First Solar, the Group's principal supplier of thin-film photovoltaic panels, was thus extended to 452 MWc in 2009. The Group also signed an agreement with First Solar for the construction of the largest solar panel manufacturing plant in France. The initial annual capacity of the plant will be in excess of 100 MWc. Under the terms of the agreement, EDF Énergies Nouvelles will finance half of the capital expense and start-up costs and will benefit from the plant's entire output for the first 10 years.

As of December 31, 2009, EDF Énergies Nouvelles also secured 168 MWc of crystalline silicium panels and amorphous silicium.

In total, 620 MWc of photovoltaic panels have been secured for the years 2010 to 2012, including a part in the form of options (excluding Nanosolar panels and output of the First Solar plant).

#### 6.4.1.1.3 OTHER HOLDINGS IN THE RENEWABLE ENERGY SECTOR

**EDF Énergies Nouvelles Réparties (EDF ENR)**

EDF ENR owned 50% by EDEV and 50% by EDF Énergies Nouvelles applies EDF's developments in renewable energy produced in the consumption place (e.g., rooftop solar panels, heat pumps, wood heaters and solar water heaters). EDF ENR operates in three ways:

- as a company with a multi-energy business model focused on providing distributed energy systems; and
- as a holding company for EDF's distributed renewable energy subsidiaries: Photon Power Technologies, Tenesol, SUPRA, RiboGiordano, Gaïapac (joint venture with EDF ENR and Stiebel Eltron (50/50)), Captelia (a joint venture with Imerys Terre Cuite (50/50) for the development of photovoltaic tiles).
- as an industrial partner in the development of new photovoltaic processes: PV Alliance, Apollo Solar and Nanosolar.

**Photon Power Technologies**

Photon Power Technologies is owned 51% by EDF ENR since the end of January 2009 (against 20% at end-December 2008). It operates through its 100% subsidiary Photon Technologies SAS, in the marketing and installation of photovoltaic systems for EDF ENR and for its own account in the business market for the system sales "turnkey".

**Photon Power Industries**

This company, owned by EDF ENR (70%) and Photon Power Technologies (30%) holds a minority stake in the company Silpro, whose object was the construction of a silicon plant purification in Provence. On August 4, 2009, the commercial court of Manosque ordered the liquidation of Silpro. Indeed, with the current financial crisis and the lower demand for silicon, Silpro has faced significant financing difficulties.

**Tenesol**

EDF ENR owns jointly with Total 50% of the group Tenesol, which manufactures and markets photovoltaic systems.

**Supra**

Supra, owned at 82.46% by EDF ENR, manufactures fireplaces, wood stoves, and fireboxes sold under the Supra and Richard Le Droff brands. It also has a trading activity of electrical devices, mainly heating.

**Ribo**

Ribo is 100% owned by EDF ENR. It develops heating systems using air/air heat pumps for individual housing (new homes or in heavy renovation) and collective housing (rehabilitation of electric heating in the social sector).

**Giordano**

EDF ENR owns 25% of the company, which operates mainly on solar thermal sector (solar water heaters).

**Gaïapac**

This joint venture with Stielbel Eltron (50/50) produces high performance air/water heat pump, product that comes in place of oil or gas boilers in homes with a hot water loop heating system.

**Captelia**

This joint venture with Imerys Terre Cuite (50/50) develops a system of photovoltaic tiles for marketing by the EDF ENR group and the Imérys group.

### 6.4.1.2 TIRU

Tiru is 51% owned by EDF group, 25% by GDF SUEZ, and 24% by Veolia. It is involved in recycling waste into electricity and steam for the urban heating systems or industrial uses. A pioneer in renewable energy since its creation in 1922, it has always used environmentally-friendly methods for generating electricity. It operates mainly in benefits of local and inter-communal groups, as well as industrial partners. In 2009, its 22 biological treatment (methanation) and heat treatment (incineration) plants in France, Great Britain, Spain and Canada, transformed 3.4 million tonnes of waste into 400,000 MWh of electricity sold and 3,100,000 MWh of steam power sold. In France, green energy resulting from waste corresponds, in terms of generation volumes, to the second source of renewable energies, after hydropower.

Tiru's treatment plants help reduce greenhouse gas emissions by valuing the biomass (organic and plant waste) found, each day, in waste bins. Every tonne of household waste that Tiru recycles saves 0.2 tonnes of oil. Furthermore, the recovery of waste is also, according to the process used, to sort and recycle metals (55,000 tonnes), clinkers (520,000 tonnes), and other types of waste such as plastic and papers (190,000 tonnes). Tiru is one of EDF's subsidiaries devoted to promoting the use of renewable energy.

### 6.4.1.3 ÉLECTRICITÉ DE STRASBOURG

Électricité de Strasbourg is a French public limited company (*société anonyme*); EDF owns 89.07% of its shares which are traded on Nyse Euronext Paris. The remaining Électricité de Strasbourg shares are held by the public.

Électricité de Strasbourg distributes electricity to 376 municipalities in the Bas-Rhin region, and has 376 concession agreements, renewed between 1993 and 1999 for a 40-year term, which serve approximately 80% of the population of the Bas-Rhin department. Due to its electricity distribution business, Électricité de Strasbourg is subject to legal and operating restrictions related to the opening up of the markets and therefore created an independent Distribution Network Operator on January 1, 2004, within the integrated company.

After agreements between parent companies at the Shareholders' Meeting of May 2009, and in order to comply with the French law requiring electricity companies with more than 100,000 customers to legally separate their grid operation and power supply businesses, Électricité de Strasbourg has set up a separate power supply subsidiary, by creating ÉS Énergies Strasbourg. This restructuration took place retroactively on January 1, 2009.

ÉS Énergies Strasbourg sells electricity to approximately 461,300 customers. The company sold 6.3 TWh of electricity and 0.2 TWh of gas in 2009.

ÉS Énergies Strasbourg, as a non-nationalized distributor, benefits from the specific purchase conditions of sale tariff for its regulated customers. On the contrary, the other customers will be supplied under conditions following the energy market logic (by operating on the private market and on Powernext), being understood that for approximately 40% of these needs, ÉS Énergies Strasbourg managed to enter into long term agreements to have access to generation.

Électricité de Strasbourg's management has implemented since early 2008 the company's 2008-2012 strategic development plan.

### 6.4.1.4 DALKIA

Dalkia is a leading European energy services provider and it generated ordinary activities of €6,854 million in 2009 on its consolidated perimeter (consolidated perimeter: Dalkia France 99.9%; Dalkia International 75.8%; Dalkia Investissement 50%; Edenkia 50%.) (Source: Dalkia Annual Report 2009). Dalkia offers a full range of services with excellent coverage throughout France, as well as substantial operations across Europe.

#### DALKIA'S BUSINESSES

Dalkia helps companies use energy as efficiently as possible through a variety of energy management services, in areas such as heating and cooling systems, thermal and multi-technology applications, industrial utilities, installation and maintenance of generating equipment, full-service facilities management, and electrical services for public grids.

Dalkia also promotes renewable and alternative energies, including cogeneration, biomass, geothermal power, household waste incineration, and heat recovery systems from manufacturing processes.

#### EDF'S STAKE IN DALKIA

At December 31, 2009, EDF owned 34% of the shares and voting rights of Dalkia's holding company, which is a simplified joint-stock company. EDF acquired this stake in December 2000 through transactions including an in-kind contribution to Dalkia of some of EDF's energy services subsidiaries. Veolia Environnement, a French company listed on Nyse Euronext in Paris and in New-York, owns the remaining 66% of Dalkia; EDF had a 3.71% stake in Veolia Environnement at December 31, 2009.

#### OWNERSHIP AGREEMENT

EDF and Veolia Environnement signed an ownership agreement for Dalkia on December 4, 2000, which was later modified on April 19, 2005. This agreement contains a change-of-control provision under which each party has the right to purchase the other's entire stake in Dalkia if the other were to be controlled by a third party competitor. The clause also gives the parties a preemptive right if Dalkia shares are sold to an outside buyer.

### 6.4.1.5 OTHER EQUITY INTERESTS

In addition to interests in non-nationalized distributors (SMEG, Enercal, Électricité de Mayotte, and EDSB), the EDF group holds interests in industrial companies. These companies contribute, in their respective business sectors – generation, fuel, engineering – to the Group's objectives, and in particular the Generation and Engineering Division, ensuring the performance in the short and medium term of EDF France's generation asset portfolio. These companies are as follows:

- Cofiva, a holding company of the EDF group, which specializes in engineering;
- SAE, which specializes in fuel transmission and trading on behalf of the EDF group;
- SOCODEI, which specializes in the treatment of low-level waste.

## 6.4.2 Natural gas businesses

EDF operates in the natural gas end-market mainly through EDF Energy (UK), EnBW (Germany), Edison (Italy), EDF Belgium and SPE (Belgium) and EDF (France) (see sections 6.3.1.1.2 ("EDF Energy"), 6.3.1.2 ("Germany – EnBW"), 6.3.1.3.1 ("Edison"), 6.3.1.4.2 ("Benelux")). The Group also operates through EDF Trading, particularly in the wholesale natural gas market.

In 2009, the Group's gas sales amounted to 213 TWh[1].

### 6.4.2.1 REGULATIONS GOVERNING THE NATURAL GAS MARKET IN THE EU

Regulations governing the EU natural gas market are discussed in section 6.5.2, "Legislation relating to the gas market."

### 6.4.2.2 EDF'S STRATEGY FOR THE NATURAL GAS MARKET

The Group plans to continue expanding its natural gas businesses in France and across Europe. It intends to strengthen its position as a European-wide supplier.

The Group aims to obtain in time a 15% market share by volume of the natural gas sold to end users in the zone encompassing France, the UK, Germany, Belgium and Italy.

EDF's sales and marketing strategy in France consists of building the loyalty of its most profitable customers and enhancing the value of its customer portfolio, while remaining within the approach of the "*Grenelle de l'Environnement*", by:

- targeting high-value customers;
- offering dual electricity and gas products, in which customers have expressed an interest; and
- capitalizing on its practice, such as the "*Bleu Ciel d'EDF*" brand for residential customers in France.

1 Sales of the companies EDF, EDF Belgium, EDF Energy, EnBW, Edison, SPE, Estag (Austria), BE ZRt (Hungary), Zielona Gora (Poland), PEC Tarnobrzeg (Poland) and MECO (Vietnam) are included for their total amount (100%) which means without taking into account the percentage of shareholding (including minority interests). The gas business of EDF Trading is not taken into account in this figure.

The EDF natural gas sales to its final customers in France reached approximately 18.5 TWh in 2009. As of December 31, 2009, approximately 530,000 residential customers and key accounts had chosen EDF as gas supplier.

The company has adopted a more aggressive approach to enter the German, Italian, and UK markets.

In Belgium, EDF acquired 51% of SPE. At December 31, 2009, SPE owned gas-fired electricity plants with a total installed capacity of 1,146 MW and sold to approximately 493,000 customers a gas volume of 21.1 TWh. In the Netherlands, EDF developed a combined-cycle natural gas plant with power company Delta, which was commissioned at the end of 2009.

In order to support the growth of its gas business, the Group intends to secure its supply through a diversified, reliable, and flexible set of purchase contracts and physical assets, related to both natural gas (reserves and purchase agreements) and logistics capacity (pipelines, LNG chain infrastructures and storage).

The projects, some already underway and others planned for the future, are designed to allow the Group to negotiate with producers directly to make it less reliant on its rivals for supply and make its services more competitive. They should also expand the scope for synergies within the Group in terms of managing its upstream and downstream operations more efficiently. In addition, handling bigger volumes will give EDF greater negotiating power with large suppliers.

EDF intends to propose innovative partnerships to gas producers, drawing on its expertise and know-how. With this in mind, EDF and Gazprom signed a framework agreement on November 27, 2009, opening up the possibility for EDF to participate in the construction of the offshore section of the South Stream gas pipeline. The agreement specifies that the participation of EDF in the South Stream project will foresee the conclusion of new long-term natural gas supply contracts. The agreement also provides for the possibility of further cooperation in the electricity sector, both in France and elsewhere. In addition, on October 20, 2009, EDF and Gazprom's trading subsidiaries announced an agreement to swap the supply of natural gas between the United States and Europe, amounting to 0.5 $Gm^3$ per year for the next 5 years.

### 6.4.2.3 SECURING NATURAL GAS SUPPLIES

In order to secure its supplies, EDF has diversified its portfolio of supply and based on purchase contracts long, medium and short terms, on the production of gas and on interventions in the wholesale markets through the support of EDF Trading. In parallel, it has a variety of contractual rights, directly or through EDF Trading, in pipelines project (in particular Netherlands and Belgium) and existing pipelines (interconnection between the UK and Belgium for example) and for the unloading of LNG cargoes in the LNG terminal of Montoir de Bretagne, Zeebrugge and in the future LNG terminal at Fos Cavaou.

The Group is continuing to build a portfolio of natural gas assets.

#### – MAIN DEVELOPMENTS IN NORTHWESTERN EUROPE

EDF, via its subsidiary Dunkerque LNG, plans to build a liquefied natural gas (LNG) terminal on Dunkirk Port land with an annual capacity of 10 to 13 $Gm^3$. Dunkerque LNG is carrying out feasibility studies relating to the development of the terminal ahead of a final investment decision envisaged for the first half of 2010, with the expected commissioning of the terminal in 2014.

In the United Kingdom, EDF Energy has pursued the development of saline aquifer storage with a provisional storage capacity of 0.1 $Gm^3$, adjacent to the existing storage site at Holehouse, property of EDF Trading. The storage facility is scheduled to become operational in 2016.

In Germany, EDF and EnBW pursue the joint development of their project storage in salt caverns at Etzel for a volume of approximately 0.4 $Gm^3$. The commissioning of the first cavities is scheduled for late 2011.

EDF, via its subsidiary EDF Production UK, also owns gas production assets in the North Sea. At the end of 2009, the gas reserves were estimated at 2.8 billion $m^3$, of which 1.7 billion $m^3$ have been developed, and production in 2009 reached 0.32 billion $m^3$.

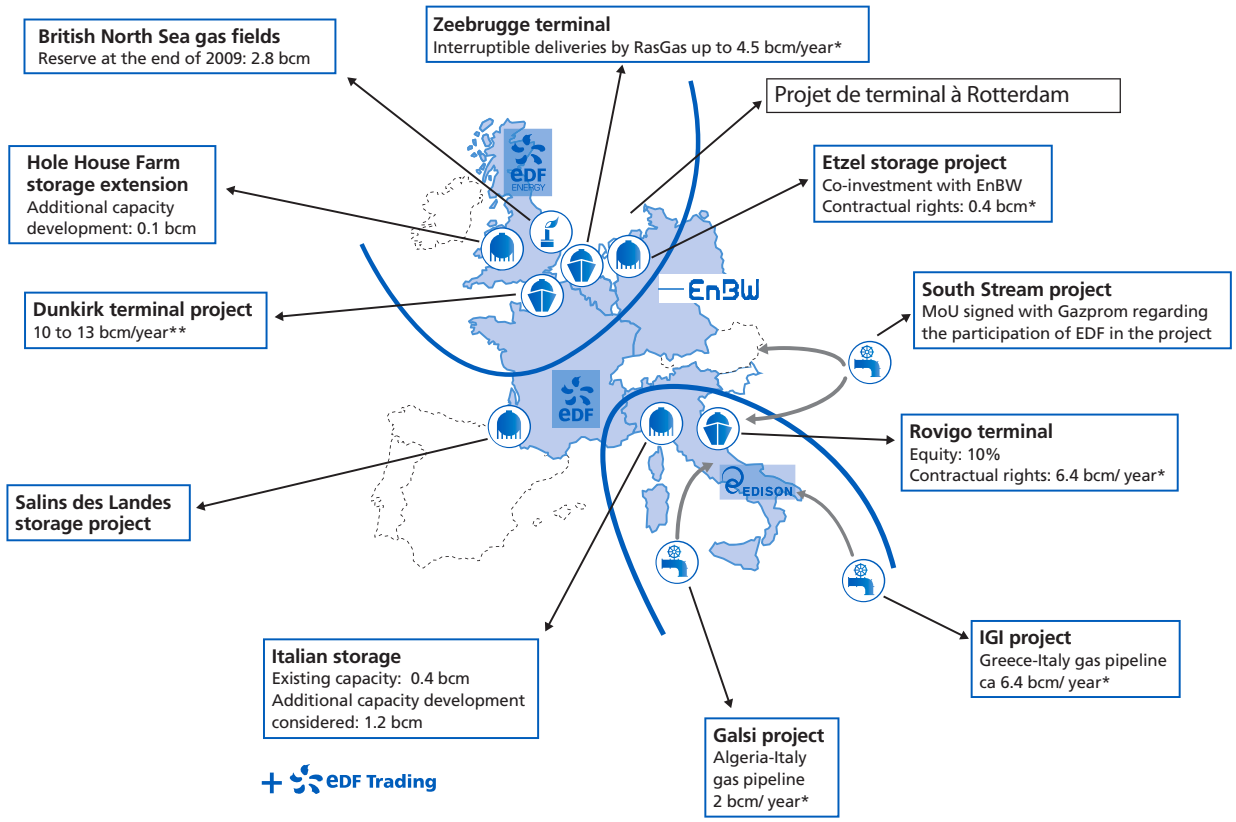
#### – MAIN DEVELOPMENTS IN SOUTHERN EUROPE

In 2009, Edison received the first deliveries of gas from Qatar following the commissioning of the offshore LNG terminal at Rovigo ("Adriatic LNG"), of which Edison owns 10% of the capital and controls 80% of the regasification capacity. From 2010 onwards, delivery of gas from Qatar should reach 6.4 $Gm^3$ annually.

Edison is also involved in two gas pipeline projects: the Galsi pipeline between Algeria and Italy with a total annual capacity of 8 $Gm^3$, and the ITGI pipeline between Turkey, Greece and Italy with an annual capacity of 8 $Gm^3$, which will also connect Greece and Bulgaria.

Edison also has two storage sites in Italy, Cellino and Collalto, with a total working volume of 0.4 $Gm^3$. Edison plans to increase the storage volume to 1.6 $Gm^3$ in the medium term with the extension of the existing storage facilities and the creation of new storage facilities in Cotignola-San Potito and Mafalda.

**PROGRESS IN IMPLEMENTING THE NATURAL GAS STRATEGY**




*Rights owned by EDF or its subsidiaries.
**Total project capacity.

## 6.4.3 Sustainable development policy and public service

For many years, the EDF group has taken all aspects of environmental and social issues into consideration. An early adherent of sustainable development initiatives, EDF now treats these efforts as a major part of its global strategy. The Group formalized its initiative, supporting a Sustainable Development policy, updated in 2009, that responds to the company's major challenges. This initiative has been translated into an environmental policy that is focused on the struggle against climate change and the protection of biodiversity, as well as a company policy that emphasizes the access to energy, the promotion of energetic eco-efficiency, the regional responsibility and the educational effort on issues related to energy. In addition, this initiative is supported by a commitment to the ethics action plan renewed in 2007 and the principles of governance adapted to the Group's development, with regard to Ethics and governance: the commitment to Sustainable Development.

### 6.4.3.1 ETHICS AND GOVERNANCE: EDF'S COMMITMENT TO SUSTAINABLE DEVELOPMENT

#### 6.4.3.1.1 COMMITMENT TO SUSTAINABLE DEVELOPMENT

In 2001, the Group launched its Sustainable Development action plan "Agenda 21," committing itself to respect the ten principles of human rights, labor standards, environmental protection, and the struggle against corruption formulated in the Global Compact initiated by the United Nations.

In 2003, after a process of dialogue and consultation with employees and subsidiaries, the Group's ethical approach led to a commitment to respect the five core business values that also are the values of Sustainable Development: respect for the individual, environmental responsibility, efficiency, commitment to solidarity, and insistence on integrity. At the end of 2007 the "Ethical Agenda," a set of guidelines established by EDF, compiles into a single document the company's initiatives and guidelines for individual conduct. It is distributed to all levels of management and delivered individually to each employee. To support management in carrying out its ethical responsibility, each operational entity appoints an ethical correspondent to contribute to the promotion of values in the company and implementing concrete ethical commitments. This ethical correspondent is to receive, in connection with the alarm device provided centrally by the Ethics Commissioner, reports from employees on ethics breaches.

Since October 2008, the Group's commitment to Sustainable Development has been incorporated into a full Sustainable Development policy, which can be broken down into three areas with the following priority objectives:

- on the environmental front, the EDF group intends to remain the lowest emitter of $CO_2$ and greenhouse gases among the large European energy companies, to adapt its plants and its product and service offers to the effects of climate change, and to reduce its environmental impact, particularly on biodiversity;

- on the social front, the Group wishes to facilitate access to energy and eco-efficiency, maintain and develop its commitments to regions where it operates, and improve the understanding and sharing of major challenges in energy, the environment and society;
- in the area of corporate governance and communications, the Group's objective is to make its dialogue with internal and external stakeholders a means of broadening and deepening the rationales and criteria for its actions, and to assess and report on its activities and performance against established goals and expectations of its stakeholders, as well as contributing to the debate on Sustainable Development on the national and international level.

This Group Sustainable Development policy also develops in more specific commitments:

- in France, the public service Agreement (*Contrat de service public*, CSP) summarizes the commitments and goals that a distributor, transmitter, and supplier of energy must achieve as part of the public service obligations imposed on it by the Government (see section 6.4.3.4 ("Public service in France"));
- abroad, the three-years Group's Corporate Social Responsibility agreement with employee representatives of employees worldwide, signed on January 24, 2005 is the context in which the signatory Group companies articulate goals and develop action plans for social responsibility which are monitored by the dialogue Committee CSR (see below) with the trade unions;
- on the social front, since September 2006, EDF has adopted a policy of promoting diversity and endorsed the National Diversity Charter. In October 2006, under its corporate social responsibility agreement, a socially responsible subcontracting agreement was signed to ensure that all purchasing conforms to ethical and corporate responsibility criteria (see section 17.2 ("Equal opportunity")).

#### 6.4.3.1.2 TOOLS FOR IMPLEMENTING SUSTAINABLE DEVELOPMENT

Implementing the commitment to Sustainable Development is a primary managerial focus which permeates all areas of our business and every specialist activity.

The Group has a Sustainable Development Department dedicated to stimulating, coordinating and supporting all actions taken by the Group's Divisions and companies to implement our Sustainable Development policy commitments and report the results. A Sustainable Committee established at the end of 2008, brings together the staff members responsible for Sustainable Development in the Group's major companies with the remit of assuring the implementation of the Group's policy and seeking to coordinate initiatives, while respecting the autonomy of each of the Group's constituents.

The implementation of the international Corporate Social Responsibility agreement ("CSR") is assured primarily by an annual review and a dialogue Committee CSR at the Group level (see section 17.6.2.3 ("Social dialogue and representation of Group employees")).

The Group also has an environmental management system (EMS) that applies to all Group units. In 2002 EDF was granted ISO 14001 certification, which was renewed in 2008 for a further three years. In 2006, the EMS was streamlined so that all actions, objectives and indicators could be harmonized with the Group's environmental policy commitments, guided by an executive Committee and theme-based groups. It is worth noting that half of the Group's contribution to profit sharing granted to EDF employees depends on reaching EMS targets, which specify 6 specific criteria for achieving ethical, environmental and social objectives.

Before being submitted to the Commitments and Holdings Committee, the Group's largest investment projects are reviewed to ensure as far as possible that they do not conflict with our Sustainable Development commitments.

#### 6.4.3.1.3 DIALOGUE, TRANSPARENCY, EVALUATION

The implementation of a range of approaches to allow exchanges of views and quality dialogue with all stakeholders is an essential element in the EDF group's Sustainable Development policy. Each of the Group's companies arranges these exchanges in the most appropriate manner, within their socio-economic framework, for the relationships they plan to develop. For EDF in France, this dialogue occurs in particular at the generation facilities (liaison and information Committees of the nuclear power plants), as well as in partnerships with non-governmental organizations.

At the central level, in 2008 the Group continued its dialogues with outside independent experts, who specialize in areas related to the Group's activities or represent the expectations and interests of society. The Sustainable Development panel, chaired by an outside expert, has a consultative role in Group planning and critically assesses how EDF fulfils its commitment to Sustainable Development (see chapter 14 ("Administrative, management, and supervisory bodies and senior management")).

Sustainable Development is also a commitment to transparency for stakeholders, which means in particular regular reporting to the Board of Directors, primarily in connection with the annual business report and the Sustainable Development Report. This reporting follows indicators derived with reference to the criteria in the Global Reporting Initiative. The Group is now asking its statutory auditors to monitor the quality of these non-financial indicators. For the fiscal year 2009, the College of Auditors has issued a report for the Group corresponding to a "Moderate Insurance" attestation.

The Group publishes Sustainable Development reports that are used as a basis for assessment by rating agencies and non-financial analysis departments acting on behalf of investors. In 2005 EDF was listed on the ASPI, an "ethical index" prepared by the French rating agency Vigeo that evaluates 120 corporations based on their Sustainable Development performance.

### 6.4.3.2 ENVIRONMENTAL POLICY

In the Sustainable Development policy updated in September 2009, the EDF group sets out to be ambitious and a trail-blazer in environmental protection, and it has prepared an environmental policy that is focused primarily on the struggle against climate change and the control of its environmental impacts, particularly on biodiversity.

#### 6.4.3.2.1 CONTRIBUTING TO THE STRUGGLE AGAINST CLIMATE CHANGE

Because a significant number of its plants are nuclear and renewable energy (including hydropower), low emitter of $CO_2$ by kWh generated, the EDF group is committed to remaining the leader among electricity companies in the struggle against climate change and the reduction of greenhouse gas emissions. It has subscribed to the European objective of reducing $CO_2$ emissions to 20% below 1990 levels by 2020, while taking into consideration the variety of local energy situations. The Sustainable Development policy commitment to remain as a group the lowest emitter of the large European energy providers is possible due to the optimized operation of its existing generating facilities and the significant renewal of its fleet. At the same time, the Group is seeking to help its customers reduce their own $CO_2$ emissions by creating and promoting eco-efficient

product offers and providing advice on a rational use of energy. A plan to reduce emissions from EDF's buildings and vehicle fleets is also being implemented, as well as a program to mobilize all staff in the struggle against climate change. Each of the Group's companies will have its own strategy, conforming to the Group's overall strategy but adapted to its activities and the energy context in which it operates.

#### *6.4.3.2.1.1* Reducing $CO_2$ emissions in the Group's industrial facilities, particularly generating plants

The EDF group is Europe's biggest energy producer, but, due to the high proportion generated from nuclear and hydropower sources, it also has one of the lowest rates of $CO_2$ emissions. In France, 95% of electricity generation emits no $CO_2$, keeping its specific emission rate in 2009 to less than 41g of $CO_2$/kWh while the European average is approximately 330g[1]. The EDF group's specific emissions rate at a global level was 117.1g of $CO_2$/kWh in 2009 (EDF estimates including emissions from heat generation).

In mainland France, EDF undertakes to reduce the absolute emissions of $CO_2$ (million tonnes $CO_2$) from its electricity generation facilities by 30% between 1990 and 2020.

EDF has a number of tools for reducing its greenhouse gas emissions, for example, in the short term, optimizing its current plants, factoring in carbon costs when ranking generating methods, and improving the operating efficiency of its plants. Over the longer term, the most important tools are modifications to generating equipment (modernizing power stations, conserving hydroelectric potential, developing renewable energy resources and minimizing the most polluting methods).

The development of renewable sources of energy is at the heart of the EDF group's strategy: the aim is to develop the renewable energy sector in a sustainable and profitable manner in Europe and worldwide. These developments include both centralized power generation projects (like the Nam Theun 2 hydroelectric power plant in Laos) and also decentralized approaches, helping customers produce energy where it is consumed. The Group is also focusing on photovoltaic energy its subsidiaries EDF Énergies Nouvelles (see section 6.4.1.1.2 ("EDF Énergies Nouvelles")) and EDF ENR (see section 6.4.1.1.3 ("Other holdings in the renewable energy sector")) with the construction of ground-based solar power systems, and the introduction of photovoltaic offers.

In addition, the Group is positioned upstream of the value chain with the manufacture of solar panels with its subsidiary Tenesol, and more recently with its subsidiary EDF Énergies Nouvelles, in partnership with First Solar, with the construction of the largest site in France for the manufacture of solar panels (original capacity: 100 MWc a year). Finally, EDF is actively investing in research and development of technologies for emerging industries such as marine energy (Paimpol-Bréhat Park Marine) and the integration of these energies in the distribution and transportation networks.

#### *6.4.3.2.1.2* Promoting eco-efficient energy and efficient usage of electricity to customers

EDF has resolved to make eco-efficiency its primary point of reference in offers to customers.

The solutions developed and marketed by EDF are firmly based on energy-efficient equipment and the use of renewable energy in buildings, as well as encouraging efficient use of energy resources.

These solutions consist primarily of:
- offers of energy demand management (EDM) services (insulation, building upgrades);
- a concentrated effort to use new distributed energies for heat production in buildings (heat pumps, solar water heaters, wood burning stoves and installations);
- developing decentralized electricity generation (photovoltaic energy);
- managing the load curve to cut back or limit consumption of energy from $CO_2$ emitting sources during "non-peak" periods;
- using "smart meters" to optimize the networks and perform remote measuring and remote actions to reduce greenhouse gas emissions;
- offering customers the option of consuming non-$CO_2$-emitting "green" energy or selecting "carbon" offers that are partially offset.

These offers from EDF's the marketing network are tied to the supply of services delivered by the Group's specialized subsidiaries, supported by an extensive network of partners.

#### *6.4.3.2.1.3* Reducing $CO_2$ emissions from our buildings and business travel

In addition to the direct emissions from its industrial facilities, EDF is committed to reducing the emissions from its service buildings, vehicle fleets, and business travel. On commercial buildings occupied by employees, the work undertaken relates to the tertiary fleet that it owns and that it rents. Furthermore, EDF is developing the energy management program "Action Planet" with all its employees. The success of the Group's internal challenge, the "Trophies of Sustainable Development" aimed at encouraging and promoting innovative ideas, demonstrates the commitment of many employees to this subject. This mobilization is based on various awareness actions (especially in favor of an employee behavioral model in terms of electricity consumption both at home and in the workplace), and the objectives of sustainable development included in the profit sharing plan.

#### *6.4.3.2.1.4* Adapting to climate change

Since climate change has an impact on the Group's generation, distribution and transportation activities, as well as on the demand for energy, EDF group has adopted a strategy for adapting to climate change broken down into specific action plans, which help the Group to reduce its vulnerability. The strategy covers industrial installations (present and future), customer offers, production/consumption optimization and R&D, and is organized around 4 themes:
- evaluate the impact of current and future climate change on our installations and activities;
- make the necessary modifications to installations to reduce their vulnerability to extreme weather events;
- take into account future climatic conditions during the planning phase of new installations;
- improve resilience to cope with unforeseen changes and extreme situations.

### 6.4.3.2.2 CONTROLLING THE ENVIRONMENTAL AND HEALTH IMPACTS OF THE GROUP'S ACTIVITIES AND FACILITIES, PARTICULARLY WITH REGARD TO BIODIVERSITY

By setting up an EMS (environmental management system), EDF is not only complying with regulations but also demonstrating its resolve to continually improve practice and performance so as to protect both the public and the environment.

1 Europe at 15 in 2007 (source: International Energy Agency, October 2009).

#### *6.4.3.2.2.1* Managing the development and operation of nuclear power plants in France

One of the challenges of the EDF group's Sustainable Development policy is to maintain the balance between nuclear and renewable energy sources. Faced with the major challenges of securing sources of supply, the struggle against climate change and the control of energy costs, nuclear power is one of the solutions whereby energy requirements can be reconciled with Sustainable Development demands. Nevertheless, acceptance of nuclear power varies among the countries where the Group has entities, subsidiaries and investments. The EDF group must therefore contribute to providing answers to questions that have been raised by public authorities about the role of nuclear power in the energy mix, while taking due account of all the impacts of this sector, from upstream uranium extraction to waste management and decommissioning of downstream sites (see section 6.2.1.1.3 ("Nuclear generation")).

Safety is the EDF group's priority in operating these facilities. It is taken into account in structural design, and is consistently monitored with the policy of motivating personnel and making major investments. The security of nuclear facilities is supervised by the National Safety Authority (*Autorité de Sûreté Nucléaire*).

The management of radioactive effluents (liquid and gas) from nuclear power stations is subject to strict regulation, and the Group's environmental policy expresses a firm resolve to limit the environmental and health impacts of its plants. Adjustments to the design and operation have allowed the achievement of a very low baseline with regard to radioactive waste.

Following this initiative, the Group is now doing the same for chemical waste. Water cooling tertiary circuits are receiving particular attention owing to the high flow rates involved. In particular, biocide treatments are proving effective in controlling microorganisms in these circuits.

Over and above monitoring its own plants, EDF also monitors the environment so as to measure the impact of its operations. The monitoring takes the form of radioecological and hydrobiological studies by independent laboratories and universities.

#### *6.4.3.2.2.2* Managing the impact of coal and gas-fired power stations

The growth of renewable and nuclear energy in various countries' energy generation mix should allow a reduction in use of conventional fossil-fired plants and thus lower consumption of fossil fuels (coal, fuel oil and gas). However, the role of traditional plants remains significant, even in France, where nuclear energy and hydropower play a predominant role. Coal and gas-fired plants do play an essential role in matching electricity generation to consumption in real time, allowing more rapid response to fluctuations in demand, unexpected peaks in consumption throughout the year, and during cold snaps.

The environmental efficiency of the coal and gas-fired power stations has improved steadily in response to tighter requirements arising from successive amendments to regulations. Investment programs combine both demands for improvements in air quality and the reduction of atmospheric emissions, as well as regulations pertaining to the reduction of greenhouse gases.

The net result of the measures taken (installing combustion gas denitrification equipment, strengthening dust filters, changing to different fuels, optimizing combustion, etc.) is a significant reduction in specific emissions and a drop in the overall volume of emissions of $SO_2$, $NO_x$, and dust per unit of electricity generated, complying with the two-stage implementation of the GIC directive on January 1, 2008, and January 1, 2016 (see section 6.5.4.3 ("Regulations applicable to other generation methods used by the Group")). In the context of sustainable development policy, the volume of each of the pollutants $SO_x$, $NO_x$ and dust from coal and gas fired-plants will be reduced at least by 50% between 2005 and 2020.

The Group is upgrading and adapting its existing plants with new investments, which make use of the best available technologies in the areas of energy efficiency, combustion, and techniques for the removal of pollutants (supercritical coal technology in Germany, and combined cycle gas plants in France, Italy and the United Kingdom).

#### *6.4.3.2.2.3* Managing the impact of hydroelectric facilities

For many years, the EDF group has been committed to strengthening its role in water management, improving its knowledge of ecosystems, and reducing still further the impact of its activities on the environment by ensuring that ecology and sediments remain as far as possible unaffected.

The new French program for opening concessions for the management of hydropower schemes to competitive bidding challenges operators, including EDF, to develop operating methods that could further improve the balance between energy generation, other uses for water and respect for the environment, particularly the coordinated management of catchment areas (coordination of the management of hydropower plants along the same watercourse).

#### *6.4.3.2.2.4* Managing the other impacts (waste, soil pollution)

The Group's industrial activities may result in soil pollution. A project manages these issues across all of the Group's sites is being implemented in four stages: making an inventory of sites (completed for EDF), identify which ones may potentially be polluted, soil analyses with priority being given to sensitive areas, which are monitored so as to control sources of pollution and develop a management plan; and finally their potential rehabilitation depending on future use and regulatory requirements.

European directive 96/59/EC of September 16, 1996, requires all member States to eliminate equipment containing PCBs or PCTs with a concentration exceeding 500 ppm by the end of 2010. Each of the Group's companies has committed to and is following its own elimination plan aimed at complying with this directive as transposed into French law.

EDF publishes an annual review of its management of conventional industrial waste arising from production activities and research.

#### *6.4.3.2.2.5* Managing environmental emergencies and crises

In order to control the risk of industrial accidents and damage to the natural world or public health, each of the Group's companies identifies potential events that could have an environmental impact, manages potentially urgent situations, and carries out appropriate crisis management exercises. A centralized organization allows crisis situations to be managed at Group level and necessary information to be provided to governmental agencies and the media. Intervention processes are regularly reviewed and improved as a result.

### 6.4.3.2.3 CONSERVING BIODIVERSITY

Like the struggle against climate change, conserving biodiversity is now seen as a major priority in protecting the environment on a global level, alongside the struggle against climate change.

As a generator and distributor of energy, the EDF group is both a user of and dependent on unspoiled terrestrial and aquatic environments.

As a beneficiary of areas and resources with which it interacts, but also because of the consequences of the damage made by other players on its own activities, the EDF group is directly affected by the challenge of preserving biodiversity.

Since it began operating its first generation facilities, EDF has striven to better understand the impacts and apply measures to avoid or offset them; for example, since the beginning of the 1980s, EDF has worked to restore major fish migration routes, specifically by investing in research and design of fish ladders.

Against a backdrop of rapid regulatory change, many initiatives relating to unspoiled and wilderness areas have been implemented by all EDF group entities. To ensure consistency among these initiatives, responsibility for biodiversity conservation has been structured around the biodiversity policy signed in May 2006, included in the Group's Sustainable Development policy and implemented within the Group's Environmental Management System.

This policy is based on three main lines of action – understanding, conservation, and awareness – each of which is supplemented by the work of the EDF "Diversiterre" Foundation. EDF relies on its partnerships with non-governmental organizations, universities, and research laboratories. In 2008, the EDF "Diversiterre" Foundation renewed its partnerships with French Nature Reserves (*Réserves Naturelles de France*/RNF), the Coastal Protection Agency (*Conservatoire du Littoral*), the Nicolas Hulot Foundation for Man and Nature (*Fondation Nicolas Hulot pour la Nature et l'Homme*/FNH), and signed new partnerships with the Bird Protection League (*Ligue pour la Protection des Oiseaux*/LPO) and the French Committee of the International Union for Conservation of Nature.

EDF also runs biodiversity projects to raise awareness among its employees, the general public, schools and local councilors, including, for example, its commitment to the 2008 and 2009 *Fête de la Nature*.

#### 6.4.3.2.4 ONGOING RESEARCH AND DEVELOPMENT

A significant portion of the R&D budget is dedicated to technologies that do not produce $CO_2$ emissions.

R&D projects dedicated to the environment cover the full range of upstream and downstream issues relating to electricity, including:

- analysis of the techniques for the capture and catchment of $CO_2$, preparing for future demonstrators (prototypes that allow validation of research);
- nuclear technologies: Generation IV reactors that will ultimately replace the EPR type, and geologic storage of radioactive wastes;
- new generation technologies: micro-cogeneration, fuel cell batteries, tidal turbine system, new solar energy technologies, and biomass gasification;
- smart grid management to allow better integration of centralized generation and distributed energy;
- electricity storage capacity to ensure continuity of supply at peak consumption points and cope with the intermittent output of certain renewable energy sources;
- efficient use of electricity, and of energy in general. Work is underway on the habitat to improve the performance of technologies such as those incorporating ENR built: heat pumps, biomass, solar hybrid sensors, optimization of sanitary solar-heated hot water, and piloting of all those applications via smart meterings or connecting infrastructures within the habitat. In the field of electric vehicles and plug-in hybrid vehicles, the work is organized around partnerships with automobile manufacturers in particular.

### 6.4.3.3 SOCIAL POLICIES

#### 6.4.3.3.1 MAIN CONCERNS

EDF strongly believes that improving its efficiency in the environmental and social arenas is integral to its financial success.

Accordingly, in 2007 EDF introduced a new social policy at Group level to create and enhance ties with outside stakeholders, optimize and strengthen communication with vulnerable customers, and invigorate internal communication.

This policy takes into account, supports, and reinforces existing action plans, ensuring that they are harmonized within the Group. Its guidelines reflect those of the UN Global Compact and are an integral part of the EDF group's sustainable development policy (September 2009) in the CSR agreement and the public service Agreement.

#### 6.4.3.3.2 STRATEGIES

The EDF group's social policy takes into account the diversity of the stakeholders it deals with (vulnerable customers, jobseekers, disabled persons, etc.). It contributes to promoting eco-efficient energy. It also seeks to facilitate access to energy and improve living and working conditions, and contributes to promoting training initiatives in keeping with the needs of the Group and its partners.

The three main strategies of the EDF group's social policy are:

- to facilitate access to energy and energy eco-efficiency. The EDF group is developing eco-efficient solutions to reduce energy insecurity and participates in the introduction of products aiming at facilitating access to energy;
- to forge over time closer links with communities where the Group operates, by supporting local development projects, particularly in the housing sector, and by offering employment to vulnerable individuals in the construction and environmental fields;
- to contribute to educational efforts on major energy issues. The objective of the EDF group in the various countries where it operates is to understand the challenges of sustainable development and global warming, and promote efficient use of energy.

All personnel at Group level are informed of developments in social policies, and there is an ongoing dialogue on the subject.

The social Council of EDF, created in 2008, is consulted by the company on its strategy, its actions and social outcomes. It brings an outside view to the company and a multidisciplinary approach on matters submitted to it. The social Council is composed of experts, internal and external, representative of the various issues related to the societal approach of EDF. It held two meetings in 2009: one on the theme "Energy Access", vulnerable persons and precariousness in developed and developing countries and the other on "Professional Integration and Diversity".

### 6.4.3.4 PUBLIC SERVICE IN FRANCE

#### LEGAL DEFINITION OF PUBLIC SERVICE IN FRANCE

The law n° 2000-108 of February 10, 2000 defines in its article 1 and 2 the outlines of electricity public service (see section 6.5.1.2 ("French legislation") below for a description of this regulation).

### THE PUBLIC SERVICE AGREEMENT (CSP)

On October 24, 2005, a public service Agreement was concluded between the State and EDF, in accordance with Article 1 of the law of August 9, 2004. This agreement establishes the duties of the EDF group and the State for the period 2005-2007 and the compensation mechanisms for service commitments. This agreement remains in force pending the signature of a new agreement, in accordance with its own stipulations.

### PURPOSE OF THE PUBLIC SERVICE AGREEMENT

This agreement is intended to provide the framework for the exercise of public service missions entrusted to EDF and its regulated subsidiaries in the open electricity market in France.

### MULTI-YEAR EVOLUTION OF ELECTRICITY SALES TARIFFS

In accordance with Article 1 of the law of August 9, 2004, one of the commitments in the Public service contract relates to the multiyear evolution of electricity sales tariffs. The article 4 of the French law n° 2000-108 of February 10, 2000 specifies that the regulated sales tariffs must cover "*the total costs incurred [...] by EDF and the non-nationalized distributors*".

Within the framework of these provisions, the French State and EDF have agreed in the public service Agreement on the need to "*progressively modify the integrated tariffs so that the general structure of sale tariffs and the structure that is specific to certain price options reflect the cost structure*".

In this context, the tariffs were increased from August 15, 2009 (see section 6.2.1.2.1.4 ("Contracts at regulated tariffs")).

This increase complies with the public service Agreement entered into between the French State and EDF on October 24, 2005. It guarantees that the average increase of the electricity sales tariffs for residential customers will not exceed the inflation rate over the first five years (see section 6.4.3.4 ("Public service in France")).

### OBLIGATIONS OF EDF (OUTSIDE NETWORK OPERATORS)

EDF's public service obligations relate to:

- Access to the Public Electricity Service and supply of electricity to customers who elect to remain under regulated tariffs. This primarily entails an obligation to:
  - supply electricity to customers who have elected to remain under regulated tariffs and energy demand management. These duties are financed by the integrated tariff,
  - promote social cohesion. Conditions for reimbursement by the CSPE of the costs arising from this duty and the integrated tariff are set forth in the law of February 10, 2000,
  - provide access to the public service. This is financed by the integrated tariff and the TURPE.
- Generation and supply, including an obligation:
  - to implement an energy policy (programming investment over several years and helping reach targets; demand-side management, energy saving certificates, etc.),
  - to continue generating electricity safely while protecting the environment;
- EDF will generate the resources required for these commitments with revenues from the integrated tariff or by selling electricity to customers having exercised their eligibility rights or on the open market;
- contributing to the security of the electricity network. EDF has undertaken to make various agreements with RTE governing the optimization of work on generation equipment and the availability of necessary resources to keep the network in good working order.

### OBLIGATIONS OF THE NETWORK OPERATORS

The network operators, ERDF and RTE-EDF Transport, have undertaken obligations in the Public service contract with respect to the management of the public networks and the safety of the electricity system. These obligations are financed by the network access tariff.

These commitments relate, in particular, to network security, quality of supply, the safety of third parties and the protection of the environment, which are four areas where the expectations of customers and local authorities are particularly high.

### MONITORING THE PUBLIC SERVICE CONTRACT

In accordance with its stipulations, the Public service contract entered into between the French Government and EDF in 2005 is monitored annually by the parties and a triennial review is established. A 2005-2007 report has been prepared and submitted to Government departments. EDF is preparing an annual report monitoring its commitments. EDF, along with ERDF and RTE, work in collaboration with the Government to draw up a new Public service contract.

# 6.5 Legislative and regulatory environment

The EDF group entities are subject to various regulations in relation to their business. In particular, EDF is subject to the European legislation applicable to the electricity and gas markets, which has been transposed into French law. EDF is also subject in particular to the regulations governing electricity distribution concessions and to the applicable environmental, nuclear and safety regulations.

The following discussion of legal and regulatory provisions is not an exhaustive description of all the legal and regulatory provisions applicable to the EDF group.

## 6.5.1 Legislation relating to the electricity market

### 6.5.1.1 EUROPEAN LEGISLATION

European directive n° 96/92/EC of the European Parliament and the European Council, dated December 19, 1996, relating to common rules for the domestic electricity market was the starting point for opening up the electricity market to competition.

This directive, which stated in particular the principle of the eligibility of the most important industrial customers, was repealed by the directive n° 2003/54/EC of June 26, 2003 which set out common rules applicable to electricity generation, transportation, distribution and supply and which is the basis of the current French regulation of the electricity market.

New rules aimed particularly at improving the functioning of the electricity market and strengthening consumer rights were established in the 3rd Energy Package, term designating a set of texts adopted on July 13, 2009 (see section 6.5.4.5.1.1 ("The "Energy Package"") below). It comprises the following documents:

- the directive 2009/72/EC concerning the common rules for the interior market of electricity repealing the directive 2003/54/EC;
- the directive 2009/73/EC concerning the common rules for the interior market of natural gas repealing directive 2003/55/EC;
- the regulation 714/2009 on the conditions of access to the network for crossborder exchanges repealing regulation 1228/2003;
- the regulation 715/2009 on the conditions of access to the networks of natural gas transmission repealing regulation 1775/2005;
- the regulation 713/2009 instituting an agency for cooperation of national energy regulators.

These rules are included in particular in directive N° 2009/72/EC of the European Parliament and Council dated July 13, 2009, which must be implemented no later than March 3, 2011 and which repeals, at the same date, directive N° 2003/54/EC of June 26, 2003.

This directive defines, in particular the arrangements for the organization and operation of the electricity sector, the rules concerning access to the market, terms of use of public transmission and distribution, providing notably for measures to strengthen the independence of the transportation networks managers, and operating rules of national regulators.

### OPENING UP THE MARKET

The European directive of June 2003 sets out a timetable for progressive opening up the electricity market to competition. Since July 1, 2007, all customers, including household customers, are eligible and can therefore freely choose their electricity supplier.

### INVESTIGATIONS CONCERNING THE ENERGY SECTOR

The European Commission announced, on June 13, 2005, a sector investigation, pursuant to Article 17 of (EC) regulation n° 1/2003, in order to identify any possible distortions to competition and dysfunctionings whether behavioral or structural in the gas and electricity markets. This investigation came as an addition to the monitoring that is currently in place and conducted by the European Commission to ensure the application of European legislation related to energy, as well as in addition to a detailed report on the energy market, dated November 15, 2005.

On January 10, 2007 the European Commission published its "Final Report" and suggested an integrated group of measures for the 21st century concerning the energy field and climate change. This report includes, in particular, a presentation of the perspectives in relation to the European gas and electricity market.

### ACCOUNTING DISSOCIATION AND TRANSPARENCY OF ACCOUNTING

The European directive of June 26, 2003 and the directive of July 13, 2009 stipulate that electricity companies must have their annual accounts audited and published in accordance with national regulations relating to the annual accounts of corporations and that, pursuant to the principle of accounting dissociation, they must prepare separate accounts for each of their transmission and distribution businesses. Since July 1, 2007, such companies are required by article 25 of the law of February 10, 2000 as amended by article 13 of the law of December 7, 2006 to hold an internal accounting that distinguishes the supply to customers having exercised their eligibility rights from the supply to customers under regulated tariffs.

Member States or any other duly appointed authority will have a right of access to the electricity companies' accounts.

### DIRECT LINES

Member States must implement the necessary measures to allow (i) all electricity generators and all electricity supply companies to supply, by means of a direct line, their own establishments, subsidiaries and eligible customers, and (ii) any eligible customer to be supplied with electricity through a direct line by a generator and supply companies.

### REGULATION (EC) N° 1228/2003 OF JUNE 26, 2003 AND (EC) N° 714/2009 OF JULY 13, 2009

The rules governing the conditions of access to the network for cross border electricity exchanges were defined by regulation (EC) No 1228/2003 of the European Parliament and Council dated June 26, 2003, entered into force on July 1, 2004 and will be replaced as of March 3, 2011, by Regulation (EC) N° 714/2009 of the European Parliament and Council of July 13, 2009, which is one of the texts of the 3rd Energy Package.

The regulation of June 26, 2003, and the regulation of July 13, 2009, provides, in particular, for a compensation mechanism between transmission system operators for the costs occasioned by accepting cross-border electricity flows on their networks. This compensation is paid by the national transmission system operators who operate the networks where the cross-border flows originate and the networks where these flows end.

### DIRECTIVE 2005/89/EC ON SECURITY OF ELECTRICITY SUPPLY DATED JANUARY 18, 2006

The directive n° 2005/89/EC on security of electricity supply, adopted on January 18, 2006, aims at better defining the responsibilities of various parties, ensuring that minimum operation norms are respected, keeping an equilibrium between demand and supply, and finally directing investments towards the networks. The challenge for EDF is to reinforce the legal regime in force, and to promote the development of interconnections. To date, this directive is only partially implemented.

### EUROPEAN COMMISSION RECOMMENDATION ON "FINANCIAL RESOURCES FOR THE DECOMMISSIONING" DATED OCTOBER 24, 2006

EDF group's nuclear installations were included in the scope of the two "Euratom" directive proposals dated January 30, 2003. These directive proposals concerned, on the one hand, the definition of basic obligations and general principles related to the safety of nuclear installations, and on the other hand, the management of the nuclear fuel irradiated and radioactive waste (nuclear package). Although these directive proposals were not adopted, a consultation process was opened and in October 24, 2006 the European Commission adopted a recommendation on "financial resources for the decommissioning" which states the following: adequate resources must be available when required; such resources must cover all operations, including burnt fuel and radioactive waste; each Member State is required to create a national independent entity as an expert in the estimate of costs and funds management which will publish an annual report and a five-year estimate of the costs. The preferable option would be a separate

decommissioning "fund", external or internal, that would assure strict accounting identification and traceability; the State (external management) or the operator (internal management) must guarantee the availability of necessary resources, which it must manage in a cautious (low-risk assets) and clear way.

### 6.5.1.2 FRENCH LEGISLATION

European directive 96/92/EC, dated December 19, 1996, was transposed into French law by the French law of February 10, 2000 modified notably by the French law of January 3, 2003, and the European directive of June 26, 2003 was transposed into French law by the law of August 9, 2004, which amended the French law of February 10, 2000 and by the law n° 2006-1537 of December 7, 2006 concerning to the energy sector.

In addition, the law establishing energy policy guidelines (*Loi de Programme fixant les Orientations de la Politique Energétique* or "LPOPE"), of July 13, 2005, defined energy policy priorities in France (supply security, reaffirming the role of nuclear power, competitive pricing for energy, combating greenhouse gas emissions and social and regional cohesion).

In relation to demand side management (DSM), LPOPE introduced a system of Energy Economy Certificates ("CEE"), the terms of which have been defined in national legislation. Consequently, energy suppliers such as EDF, will have to comply with the energy savings targets assigned to them (by the subdivision of the national energy savings target: 54 billion kWh of energy over 3 years), by the return of energy saving certificates obtained as a result of energy saving action taken or through the purchase of certificates from other energy suppliers.

EDF has achieved its individual target in terms of energy saving – 30 TWh – for the first period which is now complete (July 1, 2006 – June 30, 2009). Had the company failed to reach its target, it would have had to pay a penalty of 2 cents per kWh of shortfall. The start of the second period has been deferred as the Grenelle 2 bill will modify the CEE system, particularly in relation to individuals with energy saving targets. For this reason, the amount of energy savings that EDF will have to achieve is as yet unknown.

#### PUBLIC SERVICE COMMITMENTS

Pursuant to Article 2 of the law of February 10, 2000, EDF is responsible for a certain number of public service commitments.

#### PUBLIC SERVICE OBJECTIVES FOR ELECTRICITY

Article 1 of the law specifies that the purpose of the Public Service for Electricity is, in particular, to guarantee electricity supply throughout the territory, in accordance with the general interest.

#### RESPONSIBILITY FOR BALANCED DEVELOPMENT OF THE SUPPLY

The aim of the balanced development of the supply is to achieve the objectives set in accordance with the multi-year generation investment program, which sets the objective of dividing the generation capacity by primary energy source and, where necessary, by generation technique and by geographic area, and to guarantee supplies to areas of France which are not interconnected with the network in metropolitan France.

The generation investment program was established by an order of the MEEDDEM dated December 15, 2009.

As an electricity generator, EDF contributes, with the other generators, to the achievement of the investment objectives defined in this program.

#### RESPONSIBILITY OF DEVELOPING AND OPERATING THE PUBLIC TRANSMISSION AND DISTRIBUTION NETWORKS

Developing and operating the public electricity transmission and distribution networks consists of ensuring reliable and efficient service in France and its Overseas departments, with respect for the environment, and ensuring interconnection with neighboring countries, together with connection and access, under non-discriminatory conditions, to the public transmission and distribution networks.

Public network managers are responsible for this task: RTE for transmission, ERDF and DNN for distribution, EDF for transmission and distribution in areas not interconnected to the continental metropolitan network.

#### RESPONSIBILITY TO SUPPLY ELECTRICITY

The public service mission in relation to the supply of electricity is to guarantee the supply of electricity to customers throughout the territory with the application of regulated tariffs, the supply of electricity to customers in financial difficulty with the application of a "basic necessity" rate, and the supply of emergency support to customers where the balance responsible entity is deficient.

The conditions under which customers can benefit from regulated electricity sales tariffs are defined in Articles 66 and 66-2 of the law of July 13, 2005.

#### SOCIAL COHESION

The law of February 10, 2000 states that, as part of its mission to supply, EDF shall contribute to social cohesion, mainly through the national equalization of regulated electricity tariffs, the implementation of special rates for "basic necessity" products, and the continued supply of electricity pursuant to article L. 115-3 of the French Code of Social Action (*Code de l'Action Sociale et des Familles*). Accordingly, law n° 2006-872 of July 13, 2006, also known as the "Borloo" law, modified article L.115-3 of the French Code of Social Action with a provision prohibiting electricity suppliers from carrying out discontinuations in electricity supply during the winter period (November 1 to March 15), resulting from a default in payment of the electricity bill at the principal residence of individuals benefiting or having benefited from a decision within the last twelve months in favor of the allocation of aid from the housing solidarity fund.

#### PUBLIC SERVICE CONTRACTS

Article 1 of the law of August 9, 2004 provides that the objectives and arrangements for discharging the public service commitments assigned to EDF shall be the subject of an agreement entered into with the French State (for a description of the new Public service contract entered into by the French State and EDF, see section 6.4.3.4 ("Public service in France")).

#### GENERATION FACILITIES

The French law of February 10, 2000 opened up the electricity generation market to competition. Any person can operate an electricity generation facility, provided he has an operating license pursuant to Article 7 of the aforementioned French law and the French decree n° 2000-877 of September 7, 2000.

The competencies of local bodies in relation to the generation of electricity are contained in articles L. 2234-32 and L. 2234-33 of the General Code for Local Authorities (*Code général des collectivités territoriales*).

## ELIGIBLE CUSTOMERS

As of July 1, 2007, all customers without exception are eligible, that is they may freely conclude a contract for the purchase of electricity with a producer or supplier of their choice operating within the European Union or in a State with an international agreement with France (Article 22 of the law of February 10, 2000).

The customer can choose to benefit from regulated electricity tariffs under the conditions set out in articles 66 and 66-2 of the law of July 13, 2005. The implications of these provisions are as follows:

- every customer benefiting from regulated tariffs for a particular site can continue to benefit from regulated tariffs if they choose not to exercise their eligibility for that site;
- residential and non-residential customers consuming 36 kVA or less, who move to a site where the previous occupant had exercised their eligibility to benefit from regulated tariffs with respect to that site, may continue to benefit from the same tariffs, on the condition that a request to do so is made prior to July 1, 2010;
- other customers may not benefit from regulated tariffs as the result of a move, with the exception of cases where the previous occupant had not exercised their eligibility;
- only residential end customers, having exercised their eligibility for a given site for a period of at least 6 months, can benefit from continued regulated tariffs for that site, on the condition that the request to do so is made before July 1, 2010;
- finally, the law offers the possibility to benefit from regulated tariffs to all new sites connected to the public network before July 1, 2010.

With the deadline of July 1, 2010 approaching, Senator Poniatowski introduced a bill to increase the timeline for the right of some customers to return to regulated tariffs. The bill adopted on first reading by the French Senate on March 25, 2010 perpetuates, without any limitation in time, all the rights previously limited to July 1, 2010, except for new siteswhose subscribed power is greater than 36 kVA that can benefit from the regulated tariffs if they are connected to the public network before December 31, 2010. The bill should be reviewed by the French National Assembly in the beginning of May 2010.

In addition, in order to compensate industrial customers for the increase in market prices, the law of December 7, 2006 (article 30-1 of the law of August 9, 2004 modified by law n° 2008-776 of August 4, 2008, known as the "Modernization of the Economy"), created a temporary tariff for customers having exercised their right of eligibility: this transitory tariff for market adjustment ("*Tarif réglementé transitoire d'ajustement du marché*" ("TaRTAM")) is applicable to customers who send a written request to their supplier before June 30, 2010. This tariff is applicable as of right until June 30, 2010. According to the law, the TaRTAM tariff cannot exceed by more than 25% the regulated tariff applicable to a site with the same characteristics. This limit was settled by an Order of August 12, 2009 (*Journal officiel* of August 14, 2009) (see section 6.2.1.2.1.5 ("TaRTAM contracts")).

The compensation of the charges borne by the suppliers as a result of this system is assured partially, and under certain conditions, by using the amounts collected under the CSPE, and partially by a "hydro-nuclear contribution" owed by electricity producers operating plants with a total installed capacity of more than 2,000 MW (principally EDF), established on the basis of their generation of electricity from nuclear and hydropower sources over the course of the previous year, with a limit of €3 per MWh (article 30-2 of the law n° 2004-803 of August 9, 2004, as revised by the amended Finance Act for 2008).

## THIRD-PARTY ACCESS TO THE NETWORKS

Article 23 of the French law of February 10, 2000 states that network operators must guarantee access to the public transmission and distribution networks in order to:

- ensure the public service responsibility relating to the supply of electricity;
- ensure that the supply contracts with eligible customers are performed;
- allow a generator to supply its establishments, subsidiaries and parent company, within the limits of its own generation; and
- ensure that the electricity export agreements entered into by a generator or by a supplier to purchase electricity for resale in metropolitan France and the Overseas departments are performed.

The tariffs for using the public transmission and distribution networks mentioned in Article 4 of the French law of February 10, 2000 and currently in force were established by the ministerial decision of June 5, 2009. For more details on the tariffs for using the public transmission and distribution networks, please see section 6.2.2.4 ("Tariffs for using the public electricity transmission and distribution networks (*Tarif d'Utilisation des Réseaux Publics de transport et de distribution d'électricité*, or "TURPE")") above.

Article 23 of the French law of February 10, 2000 also provides that access to the networks is ensured through agreements to be entered into between the public transmission and distribution network operators and the users of these networks. Moreover, if it so wishes, any company selling electricity to eligible customers may enter into an agreement with the public distribution networks operators relating to access to the networks for the performance of supply agreements entered into by such company with eligible end-users.

Finally, the same article stipulates that any refusal to enter into an agreement for access to the public networks must be justified and notified to the applicant and the Energy Regulation Commission (*Commission de Régulation de l'Énergie* or "CRE"). Refusals must be in accordance with public, objective and non-discriminatory criteria and can be founded only on the imperatives related to the accomplishment of public service responsibilities and on technical reasons affecting the safety and security of the networks, together with the quality of their operation.

## ELECTRICITY PURCHASE OBLIGATIONS

EDF is subject to electricity purchase obligations pursuant to the French law of February 10, 2000.

Article 8 of this law provides that the Minister in charge of the Energy may, when the generation capacity doesn't respond to the objective of the multiyear investment programmation, allow the creation of an electricity generation plant following a call for tenders procedure. EDF as a "Producer" can apply to such a procedure. EDF as a "Buyer" is then bound to enter into an agreement with the selected applicants or into a special kind of agreement (protocol) if EDF "Producer" is a selected applicant.

Article 10 of the French law of February 10, 2000 provides that EDF and the NND are bound to enter into an agreement upon producers' request if such agreements concern the purchase of electricity generated by:

- plants which value municipal solid waste or which aim to supply a heat network;
- plants which generating capacity does not exceed 12 MW and which use renewable energies (in particular photovoltaic energy) or highly capable techniques in terms of energy efficiency, such as cogeneration;
- plants which use wind power and which are based in a wind power development area;
- plants which value recovery energies;
- in the Overseas *départements* and Mayotte, for new or existing electric facilities that generate electricity from biomass sources, including sugar cane.

Nevertheless, the abovementioned plants can only benefit once from the purchase obligation agreements and the possible excess costs resulting from such agreements, which are borne by EDF and the NND, are compensated by the electricity public service contribution (*Contribution pour le service public d'électricité* or "CSPE").

Finally, the French decree n° 2001-410 of May 10, 2001 provided that a generator benefiting from a purchase obligation should sell all of its generation to EDF and the non-binding model of purchase agreements binding EDF and the generators should be approved by the Minister in charge of the Energy. Purchasing terms and conditions and, specifically, the electricity purchase prices, are set by order of the Minister in charge of the Energy, after consultation with the High Council for Energy ("*Conseil Supérieur de l'Énergie*") and the CRE. The purchase prices of the electricity generated from photovoltaic facilities were thus decreased by two decrees of January 12, 2010, whose scope was clariified by two orders of March 16, 2010.

## MECHANISM FOR COMPENSATING EXCESS COSTS OF PUBLIC SERVICE

### The CSPE

The Contribution to the electricity public service is intended to compensate for charges attributable to the public service responsibilities assigned to EDF and to the NND.

The public service charges for which the law provides for full compensation are as follows:

Insofar as electricity generation is involved:

- excess costs resulting, on the one hand, from electricity purchase agreements following call for tender procedures (article 8 of the law of 2000) and, on the other hand, from purchase obligation agreements entered into pursuant to article 10 of the law of 2000, including cases where facilities operated by EDF or a NND are involved;
- excess generation costs in non-interconnected zones, which are not covered by the portion of the regulated tariff for customers relating to generation.

Insofar as electricity supply is involved, electricity suppliers are compensated for:

- loss of income and excess costs incurred while implementing the special pricing for an "essential commodity" set forth in Article 4 of the French law of February 10, 2000;
- costs incurred as a result of their participation in the plan established for lowest-income people (within a limit of 20% of loss of income and costs of implementing the TPN incurred by the supplier for the year in question).

Expenses borne by suppliers in accordance with TaRTAM supply are partially financed by a fraction of the CSPE, pursuant to article 30-2 of the law of August 9, 2004, but that contribution cannot exceed €0.55 per MWh.

The CSPE is collected in full directly from the final customer either:

- as an additional levy on electricity tariffs (for non-eligible customers and eligible customers that have not exercised their right of eligibility) or on network usage tariffs (for eligible customers that have exercised their right of eligibility); or
- directly from electricity generators that generate for their own use, or other end-users who do not use the public electricity transmission or distribution networks.

The amount of the contribution, by consumer site, due by eligible customers may not exceed €500,000. In addition, the total amount due for CSPE by any industrial company consuming more than 7 GWh electricity a year is limited to a maximum of 0.5% of its added value. The amount corresponding to the unitary contribution is also limited by the law of February 10, 2000 to 7% of the kWh sales tariff, excluding subscription and taxes, corresponding to a subscription of a capacity of 6 kVA without erasing or horosaisonality.

The massive expansion of facilities generating electricity from renewable energy sources (mainly wind and photovoltaic) beneficiaries of the obligation to purchase, leads to a significantly heavier loads to compensate for the CSPE.

### Compensation for excess distribution costs

Tariff equalization is intended to spread the charges incurred as a result of public service commitments assigned for managing the electricity distribution networks between the operators involved (network managers designated in II of article 2 of the law of 2000).

## REGULATION OF THE ELECTRICITY SECTOR

### The Energy Regulation Commission

The Energy Regulation Commission (*Commission de Régulation de l'Énergie*, or "CRE") is an independent administrative authority created by Article 28 of the French law of February 10, 2000. The amounts required for the CRE to carry out of its missions are registered in the French State general budget.

The law of February 10, 2000 gives a general definition of the CRE's mission: *"In accordance with the powers given to it, the Energy Regulation Commission contributes, to the benefit of the final consumers, to the right functioning of electricity and natural gas markets. In particular, it assures that the access conditions to electricity and natural gas transmission and distribution networks do not inhibit the development of competition. Also, concerning electricity and natural gas, it supervises the transactions carried out between suppliers, merchants and producers, transactions carried out on organized markets, as well as over-the-border exchange transactions. It assures the consistency of suppliers, merchants and producers' offers with their technical and economical restrictions."*

The CRE does not only have an advisory power (proposal power and the power to render an opinion), but also a decision power (approval power and regulatory power).

The CRE proposes to the Ministers in charge of the Economy and Industry usage tariffs for public transmission and distribution networks, the charges attributable to public service commitments assigned to electricity generators and the net amount of the related contributions.

It also has important information and investigation powers, as well as the authority to settle disputes and to apply penalties, which the law of December 7, 2006 granted to an ad hoc Committee within the commission: the dispute settlement and penalty Committee (CoRDIS), which is composed of members of the *Conseil d'Etat* and of the *Cour de cassation*.

The missions and powers of the CRE are likely to be the modified to take into account the provisions contained in directive n° 2009/72/EC of July 13, 2009 in relation to national regulation authorities (see section 6.5.4.5.1.1 ("The "Energy Package"")).

Furthermore, Regulation (EC) n° 713/2009 of the European Parliament and of the Council of July 13, 2009, establishes an Agency for the Cooperation of Energy Regulators (ACER). A community body with a legal personality, ACER will issue advice relating to the energy regulators, will participate in the creation of network codes in the electricity and gas sector and can take decisions relating to cross-border infrastructures (see also section 6.5.4.5.1.1 ("The "Energy Package"")).

## 6.5.2 Legislation relating to the gas market

### 6.5.2.1 COMMUNITY LEGISLATION

On June 22, 1998, the European Parliament and the European Council passed European directive 98/30/EC, intended to establish a European gas market in the Member States. This directive was repealed by European directive 2003/55/EC of June 26, 2003 relating to common rules for the European natural gas market, which accelerated the opening of the natural gas markets to competition by providing that this opening would be extended to all customers from July 1, 2007.

New rules aiming to improve the operation of the European natural gas market are defined in directive N° 2009/73/EC of the European Parliament and of the Council of July 13, 2009, which should be transposed by March 3, 2011 and which on the same date repeals directive N° 2003/55/EC of June 26, 2003.

This directive establishes, in particular the general terms relating to the organization and operation of the natural gas sector, rules relating to transportation, distribution, supply and storage of natural gas, and measures and conditions of access for third parties to the facilities and networks in question.

Additionally, Regulation (EC) N° 715/2009 of the European Parliament and of the Council of July 13, 2009 on conditions for access to the natural gas transmission networks will repeal Regulation (EC) N° 1775/2005 as of March 3, 2011.

### 6.5.2.2 FRENCH LEGISLATION

The first European directive of 1998 was transposed into French law by law n° 2003-8 of January 3, 2003, relating to the gas and electricity markets and to the public service for energy, as amended and supplemented by French law n° 2004-803 of August 9, 2004, by the LPOPE and law n° 2006-1537 dated December 7, 2006 relating to the energy sector.

European directive 2003/55/EC was transposed into French law mainly by the law of August 9, 2004 and the law of December 7, 2006.

#### LAW N° 2003-8 OF JANUARY 3, 2003

**Access to natural gas systems**

This law provides that eligible customers, suppliers and their agents have a right of access to natural gas transportation and distribution facilities, and to LNG facilities, under the terms and conditions set forth in an agreement with the operators.

Natural gas network operators must refrain from any discrimination between users or categories of users.

**Eligible customers**

The French law of January 3, 2003 provides, in particular, that eligible customers have the option to be supplied with natural gas by the supplier of their choice.

Since July 1, 2007, in accordance with the European directive 2003/55/EC, confirmed by directive 2009/73/EC, and following the implementation of the law of December 7, 2006 concerning the energy sector, all customers have been able to freely choose their supplier.

Based on the provisions of the French law dated July 13, 2005, as amended by French law n° 2008-66 dated January 21, 2008, a non-residential customer cannot benefit from regulated tariffs for the sale of gas for a site unless it or its predecessor at the site exercised eligibility for that site.

In addition, a non-residential customer cannot claim the benefit of regulated tariffs for a new site.

The situation is different for residential customers who, since publication of the French law dated January 21, 2008, can, provided they make the request before July 1, 2010, enjoy regulated tariffs for a site, subject to the sole condition they have not themselves exercised their eligibility rights for that site, and they can also benefit from regulated tariffs for a new site connected to the network before July 1, 2010.

The bill of Senator Poniatowski adopted on first reading by the French Senate on March 25, 2010 extends indefinitely the right to regulated tariffs for the new sites of residential customers and allows these same residential customers to return to regulated tariffs for a given site six months after having exercised their eligibility. The bill will be reviewed in early May by the French National Assembly.

Domestic clients eligible for the special "Vital Commodities" tariff for electricity benefit, at their request, for part of their consumption, from a special solidarity tariff applicable to the supply of natural gas and related services. The proceedings of enforcement of this provision are fixed by decree n° 2008-778 of August 13, 2008 related to the supply of natural gas at the special solidarity tariff. The additional costs resulting from supply at this tariff are offset by a contribution by the suppliers of natural gas and based on the quantities of natural gas sold by these suppliers to the final consumers.

**Suppliers**

French law defines suppliers as persons who (i) are based in the territory of a Member State of the European Union or in the territory of another State pursuant to international agreements, and (ii) possess a license issued by the Minister in charge of the Energy.

EDF is licensed, pursuant to an order of the Deputy Minister of Industry, dated September 14, 2004, to operate as a natural gas supplier to non-residential customers that do not provide a service of general interest, and pursuant to an order dated August 9, 2005, to non-domestic customers that do provide a service of general interest as well as to gas distributors and suppliers and, following an order of June 15, 2007, residential customers.

**Transmission and distribution of natural gas**

The French law of January 3, 2003 provides, in particular, that carriers and distributors must ensure the safety and efficiency of their network and the balance of natural gas flows, taking into account technical constraints.

**Determination of tariffs**

The tariffs for using the transmission and distribution networks and LNG facilities and regulated tariffs for the sale of natural gas are determined, according to public, objective, and non-discriminatory criteria and taking into account the type of service and the associated costs, jointly by the Minister of Economy and the Minister in charge of the Energy upon the recommendation of the CRE.

The tariffs for using the natural gas public distribution networks of Gaz Réseau Distribution France (GrDF) came into effect on July 1, 2008, for a period of four years in application of the order of June 2, 2008, modified by the order of June 24, 2009, approving the tariff proposal of February 28, 2008, put forward by the CRE. The tariffs for using the natural gas transmission networks came into effect on January 1, 2009, in application

of the Order of October 6, 2008, approving the tariff proposal of July 10, 2008, put forward by the CRE.

The decree n° 2009-1603 of December 18, 2009 modifies the conditions for the determination of regulated tariffs for the sale of natural gas. This decree sets out the principle of covering the costs borne by each supplier by requiring the Ministers for the Economy and Energy to establish a tariff formula for each supplier that would determine the average cost of supply. The Ministers in question will fix a price list that can be modified during the year by the suppliers, following the submission of a request to the CRE.

#### Underground storage and third-party access to natural gas stocks

The French law of January 3, 2003 requires all suppliers to hold, on October 31 of each year, directly or indirectly through an agent, sufficient inventories of natural gas in France to comply, for the period between November 1 and March 31, with its direct or indirect contractual obligations to supply its residential customers and other customers that are charged with public service obligations or that have not contractually accepted interruptible gas supply.

The decree n° 2006-1034 of August 21, 2006, as amended by the decree n° 2010-129 of February 10, 2010, specifies the laws and regulations applicable to underground storage of natural gas.

#### Audit and penalties

The law of January 3, 2003 grants authority to the Minister in charge of the Energy and the Minister of Economy to inquire into matters concerning the regulation of the gas market. The Minister in charge of the Energy may also levy a fine, or withdraw, or suspend for a term which may not exceed one year, a license to supply natural gas.

## 6.5.3 Public electricity distribution concessions

### CONCESSION SYSTEM

The concessions regime, established by article 6 of the law of June 15, 1906, was upheld by the French law of April 8, 1946, which transferred to EDF existing concessions and upheld the rights of the NND (*non nationalized distributors*), then confirmed by the law of February 10, 2000. Pursuant to the above, the licensors organize the public electricity distribution service through concession agreements and specifications which set forth the rights and obligations of the authority, in its capacity as licensor, and the licensee, respectively. The licensors are most often public establishments for intermunicipal cooperation, or even at the departemental level.

The separation of supply and network operations, imposed by directive n° 2003/54/EC and confirmed by directive 2009/72 of July 13, 2009, led to the identification by the law of December 7, 2006 of two separate missions: on one hand, the supply at regulated tariffs entrusted to EDF and the NND in their exclusive service zones, and on the other hand the development and operation of the public electricity distribution networks being entrusted to EDF and the NND in their service zones, and to EDF for those zones not interconnected to the metropolitan continental network. Article 14 of the law of August 9, 2004 provides that singing of new contracts, amendments and restatements of the concession agreements will have to be executed by the three parties: the public entity granting the concession, the distribution network managers for the part relative to management of the public distribution network and EDF (or the territorially competent NDD) with respect to supply at regulated tariffs. The ongoing agreements are deemed to have been signed jointly by these three entities.

#### Rights of authorities granting a concession

Authorities granting a concession have the following rights:

- the possibility of personally managing the expansion of distribution networks;
- ownership of the facilities covered by the concession (property to be returned); with the exception of source stations transforming high or very high voltage current to medium voltage belonging to ERDF (see Article 36 II of the law of August 9, 2004);
- right to collect rents (see section 6.2.2.2.3 ("Concessions") above);
- electricity generation, limited to facilities that are in close proximity enabling extension or network upgrade savings, and the power of which does not exceed 1 MW (or 2 MW in Guadeloupe, French Guyana, Martinique and La Réunion) as set forth in the French decree n° 2004-46 of January 6, 2004;
- demand-side management for consumers supplied with low voltage with a view to saving energy when extending or upgrading the public distribution network; and
- audit of the licensee's business, carried out by an auditor appointed by the licensor which is distinct from the public distribution network operator.

For more details concerning the content of the concession agreement and the specifications, see section 6.2.2.2.3 ("Concessions") above.

## 6.5.4 Regulations relating to the environment, nuclear facilities, health, hygiene and safety

EDF's business in France, as well as in other countries where EDF operates, is subject to regulations related to the environment, nuclear power, health, hygiene and safety. Compliance with these regulations, which are increasingly restrictive and subject to constant change, exposes the Group to significant costs.

### 6.5.4.1 REGULATIONS APPLICABLE TO CLASSIFIED FACILITIES FOR THE PROTECTION OF THE ENVIRONMENT

#### LICENSES

The EDF group's business in most countries where it operates is subject to obtaining permits or licenses, or to the completion of formalities prior to beginning operations. These obligations notably stem from regulations related to the environment, urban planning, health, hygiene and safety.

Some facilities operated in France by EDF, mainly fossil-fired power plants, are subject to the legislation relating to Classified Facilities for the Protection of the Environment (*Installations Classées pour la Protection de l'Environnement*, or "ICPE"). Pursuant to the rules contained in the French Environment Code (*Code de l'environnement*), facilities which may present dangers or disadvantages, mainly to public health and safety, are subject, according to the magnitude of the dangers or disadvantages presented by their use, either to a prior declaration or to an authorization. In the latter case, the authorization to operate will take the form of an order of the *préfet*

issued after consultation with various bodies and a public inquiry, containing specific operating instructions.

In addition to the ICPE authorization or statement regime, the regulation n° 2009-663 of June 11, 2009 on registration of certain classified facilities for environmental protection, amended the Code of environment by creating a third regime of facilities: facilities subject to a simplified authorization "under the name registration" (article L. 512-7).

The ICPE regulations also require, when a facility is taken out of service, the restoration of the site, depending on the expected use of the land.

ICPEs are placed under the control of the *préfet* and the regional departments for industry, research and the environment (*Directions Régionales de l'Industrie, de la Recherche et de l'Environnement*, or "DRIRE"), which are responsible for organizing inspections of classified facilities. If the operator of an ICPE fails to comply with the instructions imposed on its operations, and regardless of any potential criminal proceedings, the *préfet* may impose administrative penalties, such as the deposit of a sum equal to the cost of the work to be done to make the facilities compliant, forced execution of the measures prescribed by order, suspension of operations, or a proposal for the shutdown or removal of the facility by decree rendered upon review by the French *Conseil d'Etat*.

### HEALTH AND SAFETY PROVISIONS

The safety provisions in the ICPE regulations require, prior to the authorization of a facility, the completion of a study setting forth the dangers, including an analysis of the risk of accidents, as well as the appropriate measures to reduce the probability and impacts of these accidents. The project for creating an ICPE, which is subject to authorization, must also be the subject of a public inquiry regarding any effects it might have on public health, safety and salubrity and on the protection of the environment. In addition to technical instructions for the protection of health and safety, the authorization order may also impose on the operator of a classified facility the preparation of an Internal Operation Plan (*Plan d'Opération Interne*, or "POI") setting out organizational measures, action measures and the necessary resources to protect employees, the population and the environment in the event of an accident.

## 6.5.4.2 SPECIAL REGULATIONS APPLICABLE TO NUCLEAR FACILITIES

From now on, EDF is subject in France to law n° 2006-686 of June 13, 2006 concerning transparency and security in the nuclear field ("TSN law"), which determines the main provisions applicable to Basic Nuclear Facilities (*Installations Nucléaires de Base*, or "INB"). The law created the Nuclear Security Authority (*Autorité de Sûreté Nucléaire* or "NSA"), an independent administrative authority, which takes up a large part of the functions previously assigned to the *Direction Générale de la Sûreté Nucléaire et de la Radioprotection* (DGSNR), the ministries retaining authority over the issuance of key permits and the drafting of the general regulation. Pursuant to this law, the decree n° 1228 of December 11, 1963 relating to nuclear fields has been repealed and replaced by a new decree n° 2007-1557 of November 2, 2007 relating to basic nuclear fields facilities and to the control, regarding nuclear security, of the transportation of radioactive substances.

The TSN law provides, in particular, that the establishment of an INB is authorized, following a public inquiry, by a decree of the Prime Minister issued following a report by the ministers in charge of Nuclear Security (which means the Minister of Economy and the Minister in charge of the Energy) after advice of the French NSA. This new decree defines the scope of the facilities, mentions the nature and the capacity of the installation, sets the time by which those facilities should start to be operated and the frequency of security reviews if it is not equal to 10 years and, finally, imposes essential elements which ensure the protection, in particular, of health and public safety, of nature and of the environment. This commissioning authorization is granted by the French NSA. Safety check enables to evaluate the compliance of the facilities to the applicable regulations and to update the risk assessment that the facility poses to the interests mentioned above. The operating life of an INB is usually not defined by regulation although there is no objection to it.

In addition, water pumping conditions, liquid and gaseous waste discharges, whether radioactive or not, which are likely to cause atmospheric pollution or specific odors, was well as the associated limits will be set in accordance to the authorization decree, following decisions of the French NSA, subject to the approval by the Ministers in charge of the Nuclear Safety with respect to the decisions fixing the limits.

The French NSA will also give other instructions in accordance with the creation authorization decree, in particular, to prevent or limit the effects of any incidents, to define individual and collective means of protection of the populations, to limit noise annoyances and manage the waste generated or stored by the facilities.

### RULES FOR THE SAFETY AND CONTROL OF NUCLEAR FACILITIES

EDF's nuclear facilities are subject, as soon as they are established, to nuclear safety regulations. Accordingly, the application for an authorization namely includes a preliminary report of the safety which consists of, for what concerns the INB, a study of the impact on the environment, a study of the dangers that sets forth the measures taken to reduce the risks inherent to operating an INB and to limit the consequences of any accident and an study of the facility on environment and on health, a decommissioning plan and a risk management study. INBs must also comply with the general rules of the ministerial order for the protection from risks in the safety, health, sanitary and nature and environment protection fields. An Internal Emergency Plan (*Plan d'Urgence Interne*, or "PUI") specifying the organization and resources to be implemented in the event of an accident must be drafted by the operator. In addition, the latter must also prepare an annual report, submitted to the CHSCT and published, namely describing the measures taken in terms of nuclear safety and radiation protection. Moreover, any accident or incident, nuclear or not, which has or may have significant consequences for the safety of an INB must be declared immediately, in particular, to the French NSA, which will ensure the adoption of appropriate measures to remediate the accident or incident and to avoid such an accident or incident being repeated.

The French NSA can make technical regulatory decisions to complete the implementation methods of the decrees and orders passed in the nuclear safety and radiation protection fields. Such decisions are subject to the relevant ministers' approval.

The TSN law also includes provisions concerning public information and transparency, such as the creation of a high Committee for transparency and information on nuclear safety or the possibility made possible to any person to ask directly to the operator for information on the risks to the safety of its installation.

Finally, increasingly stricter administrative and criminal penalties have been created to sanction INB operators who do not comply with their legal and regulatory obligations, such as three years of imprisonment and a €150,000 fine if the INB is operated without an authorization, or one year of imprisonment and a €30,000 fine if radioactive substances are transported without authorization.

## DECOMMISSIONING NUCLEAR FACILITIES

The final shutdown and decommissioning of an INB are authorized by decree after the French NSA has given its opinion. The latter gives instructions concerning the decommissioning and the decree will notably determine the decommissioning characteristics and delay. Once the decommissioning completed, the operator sends the French NSA a decommissioning request. Subject to the procedure provided by the decree INB, the French NSA will render a decommissioning decision which will be subject to approval.

## RADIOACTIVE WASTE

The EDF group's business is subject to French regulations for the handling, storage and long-term management of nuclear waste. EDF is legally responsible for the nuclear waste resulting from its business. In France, radioactive waste is managed by the National Agency for Radioactive Waste Management (*Agence nationale pour la gestion des déchets radioactifs*, or "*ANDRA*"), an EPIC created by the French law of December 30, 1991. The method for the storage of nuclear waste in France depends on its degree of radioactivity and its nuclear activity period. In addition to certain temporary storage on EDF sites, very low-level waste produced by EDF (from, for example, concrete or metal waste left over after decommissioning a nuclear power plant) is stored on an ANDRA site, known as "TFA", opened in 2003. Short life, low-or medium-level waste that is produced by EDF's business is stored above ground at the ANDRA's Aube storage center (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). Long life, high-level waste produced from the treatment of burnt fuel is vitrified and stored temporarily at the AREVA NC (formerly Cogema) center at The Hague pending the adoption of a long-term management solution (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues") below).

Long life, medium-level waste (for example, from shells, ends and clad pieces etc.) is either cemented or compacted and confined in stainless steel containers. They are currently in intermediate, temporary storage pending a final decision concerning long-time management (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")).

The National Commission for the evaluation of research concerning the management of radioactive waste has presented its final evaluation report on January 18, 2006. The report opts for "reversible deep geological underground storage" as an option that should be retained for ultimate waste, even if the conditions for a possible final decision on storage were not yet fulfilled. Following the passing of program law nº 2006-739 of June 28, 2006 concerning the long-term management of radioactive materials and waste, research and studies concerning HAVL and MAVL waste are carried out in accordance with the three complementary axes hereunder:

- separation and transformation of long-life radioactive elements, in order to obtain, by 2012, an evaluation of industrial prospects in such fields and to commission a new prototype facility before December 31, 2020;
- reversible storage in deep geological layers: choice and conception of a storage center, for which an authorization request should be filed in 2015 and which should be commissioned in 2025, subject to such authorization;
- storage: in order to create new storage facilities or change the existing facilities at latest by 2015.

The question of what option should be retained in France regarding the management of a long-life high-level waste was the subject of a public debate organized by the "*Commission Nationale du Débat Public*" ("CNDP"). The report of this debate, as well as the conclusions of its President, was made available on January 27, 2006. The CNDP's most remarkable contribution is the appearance of a new possible strategy which includes both the carrying out of test on the geological storage and the creation of a long-term storage prototype.

In addition to the three axis mentioned above, the program law of June 28, 2006 provides for a national radioactive materials and waste management plan, updated every three years, which will consist of a report of the existing management methods and determine expected storage and storage needs; the law sets forth that a deep geological layer storage center is a basis nuclear facility for which the creation authorization by a decree of "*Conseil d'Etat*" is preceded by a public debate. This law also sets forth for the organization and the financing of radioactive waste management.

Finally, it also provides for the framework of the evaluation and covering nuclear facilities decommissioning costs and for the management of burnt fuels and radioactive waste. In particular, assets dedicated to the hedging of provisions cannot be used for any other purpose by the operator, and should be subject to a different accounting. The implementation of such provisions will be controlled by the administrative authority, which consists of the Minister in charge of the Economy and Minister in charge of the Energy, itself under the control of a National Commission for the evaluation of financing of INB's decommissioning costs and for the management of burnt fuels and radioactive waste.

Transportation of radioactive waste is subject in France to Articles L. 1333-1 et seq. of the French Defense Code (*Code de la défense*), governing the protection and control of nuclear materials, and the regulations for the international and national transportation of hazardous goods, under the control of the French NSA. The latter carries out a critical analysis of the security files submitted by applicants to obtain approval for their prototype package. The objective of these regulations is to prevent the loss or disappearance of packages containing nuclear materials, mainly while in transit, and to ensure human and environmental safety, while controlling the risks of contamination by packages containing nuclear materials.

Decree nº 2007-243 of February 23, 2007 concerning the securing of nuclear costs financing, which provisions are applicable since June 29, 2007, sets forth the implementation conditions and methods of the program law of June 2006.

Accordingly, the operator can evaluate costs according to five categories (nuclear facilities decommissioning costs, burnt fuels management costs, etc.) which are themselves divided into several kinds of operations following a list provided by an administrative authority's order. The costs are evaluated according to a method based on an analysis of the different contemplated options for the implementation of the operation and on that basis, prudently choose a standard strategy.

The discount rate, used for the calculation of provisions, is determined by the operator and can exceed neither the profitability rate expected from hedging assets managed according to a sufficient safety and liquidity degree nor a ceiling determined by an administrative authority's order.

Different kinds of hedging assets are accepted within a certain percentage, such as bonds, claims or securities issued or guaranteed by a member state of the European Community or of the OECD, or shares and other securities giving access to the share capital of companies whose headquarters are based on a member state of the European Community or the OECD.

Property assets, claims' acts or titles, deposit accounts must be kept or opened in France. The operator must keep a currently updated register of hedging assets and have summary report be transferred every three-months to the administrative authority. The operator's Board of Directors determines the framework of the hedging assets creation and management policy, in accordance with the assets' purpose and general principles of prudence and risk sharing.

In addition, a Committee should be created by the Board of Directors which will be in charge of examining and giving its opinion on the framework of the hedging assets creation and management policy, as well as a permanent procedure for the internal control of costs financing and in particular, their evaluation and of the management of hedging assets.

Finally, a report is filed with the administrative authority and the French NSA every three years, a copy of which is sent to the statutory auditor, which includes a description of namely the costs evaluation, the methods used for the calculation of provisions and the composition of the assets. The administrative authority can require any additional explanation, have an external entity prepare a study or require that an expertise of the assets value be carried out, at operator's expenses.

### RADIATION PROTECTION REGULATIONS

In France, the French Public Health Code *(Code de la santé publique)* states that all nuclear activities where there is a risk of exposure of persons to ionizing radiation fall under the authority of the French NSA. General protection of the population against radiation is based mainly on the subordination of any nuclear activity to a declaration or an authorization. Authorizations issued for the establishment of an INB as described above encompasses such authorization. The French decree n° 2002-460 of April 4, 2002 relating to the protection of persons against the dangers of ionizing radiation, which transposes the provisions of European directive 92/29/EURATOM of May 13, 1996 and European directive 97/43/EURATOM of June 30, 1997, sets the maximum exposure by the general public at 1 mSv per year.

French regulations relating to the protection of workers against the dangers of ionizing radiation, based on European directive 96/29/EURATOM and on French decree n° 2003-296 of March 31, 2003, specifically impose a limit on exposure of workers to ionizing radiation of 20 mSv for 12 consecutive months.

To ensure the transposition of the directive 2003/122/EURATOM of December 22, 2003 on the control of high-activity sealed radioactive sources and orphan sources, and to introduce changes resulting from the law regarding transparency and safety in the nuclear field dated June 13, 2006, the regulatory part of the Public Health Code was amended by the decree n° 2007-1582 of November 7, 2007 relating to the protection of individuals against the dangers of ionizing radiation.

### CIVIL LIABILITY OF NUCLEAR FACILITY OPERATORS

A number of international agreements govern the civil liability of nuclear facility operators, in particular the Paris Convention of July 29, 1960 on Third-Party Liability in the Field of Nuclear Energy and the Brussels Convention of January 31, 1963, supplementary to the Paris Convention. These two conventions are applicable to the signatory countries that have ratified them, including France, the United Kingdom and Germany, countries in which the Group operates nuclear facilities (in France, through EDF, in the United Kingdom, through EDF Energy, and in Germany, through EnBW). In France, pursuant to these conventions, nuclear civil liability is governed by the French law n° 68-943 of October 30, 1968, as amended.

The Paris Convention institutes a specific liability scheme, which has the following characteristics:

- *damage covered:* repair of any damage to persons and property;
- *type of liability:* "*responsabilité objective*", i.e., strict liability;
- *exemptions:* the operator is not liable for damage caused by a nuclear accident if such accident is due directly to acts of armed conflict, hostilities, civil war, insurrection or a natural catastrophe of an exceptional nature; however, acts of terrorism are not an exemption;
- *responsible person:* the principle of channeling liability to one person or entity: the operator of the nuclear facility where the nuclear substances that caused the damage are held or where they originated;
- *limits of liability:* the operator's liability may be limited both in its amount and its term by national legislation, provided this complies with the common minimum liability amount as set by the Conventions:
  - if the facility is in France, the operator's liability is limited to approximately €91.5 million per nuclear accident in a facility and to approximately €22.9 million per nuclear accident during transportation. The time granted to make a claim for compensation is 10 years from the date of the accident,
  - over and above the maximum amount for which the operator is liable, the State in which the accident occurred will be liable for the compensation of victims up to a maximum of €228.6 million,
  - over and above this amount, member States that are signatories of the Brussels Convention (which includes France) contribute collectively to compensation up to a ceiling of €381.1 million;
- *financial guarantee:* there is an obligation of insurance or financial guarantee by the operator up to the fixed liability amounts, in order to guarantee the availability of funds. This insurance or financial guarantee must be approved by the State in which the insured or guaranteed facility is located. EDF has opted for insurance and has complied with the applicable requirements for coverage (see section 4.1.3 ("Insurance")).

Protocols amending the Paris Convention and the Brussels Convention were signed on February 12, 2004. They require the availability of compensation amounts which are much greater, in order to cover a greater number of victims and types of collateral damage. The operator's liability is accordingly at least €700 million per nuclear accident in a facility and €80 million per nuclear accident during transportation. The State where the nuclear facility responsible for the damage is located will be liable for amounts above the €700 million for which the operator is liable, up to a maximum amount of €1,200 million. Above this amount, the States that are a party to the Brussels Convention will be liable up to a maximum amount of €1,500 million.

In addition, for physical injury only, the time granted to claim compensation will change from 10 years to 30 years from the date of the accident.

Another important change is the introduction of a detailed definition of the concept of "nuclear damage", which includes non-economic loss, the cost of preventive measures, the cost of restoring a damaged environment and certain other losses resulting from damage to the environment.

Finally, the protocols provide that exemptions of an operator's liability will be limited to cases of armed conflict, hostilities, civil war or insurrection (natural disasters no longer entitle the operator to an exemption).

These new provisions were transposed into French law by the above mentioned TSN law of June 13, 2006. These provisions will only be applicable, however, when the protocols mentioned above come into force which requires two-thirds of the signatory states to ratify them. France has adopted a law enabling the ratification of both protocols (law n° 2006-786 of July 5, 2006) but has not yet filed the relevant ratification instruments as initialized by the Ministry of Foreign Affairs.

## 6.5.4.3 REGULATIONS APPLICABLE TO OTHER GENERATION METHODS USED BY THE GROUP

### SPECIFIC REGULATIONS FOR FOSSIL-FIRED GENERATION

The EDF group's fossil-fired generation business is subject in France to the regulations relating to ICPEs. EDF's fleet of fossil-fired facilities must also comply with specific regulations relating to the quality of the air, adopted mainly as a result of the European directive 2001/81/EC of October 23, 2001

on national emissions ceilings for certain atmospheric pollutants (NEC directive), and European directive 2001/80/EC of October 23, 2001 relating to the limitation of emissions of certain pollutants into the air from large combustion plants (LCP directive) (see section 6.5.4.5 ("Principal draft regulations likely to have an effect on the EDF group's business") for a description of these specific regulations).

Exemptions are possible for facilities working at most 20,000 hours between 2008 and 2015 and a pollutants issuance reduction plan (SNR) has also been provided for which could allow a sharing of the disposals following the gathering of several facilities and therefore lead to an increased flexibility. European directive 2003/105/EC of December 16, 2003 (so called Seveso 3), was transposed into French law by decree n° 2005-989 of August 10, 2005 (higher thresholds) and by the order of September 29, 2005 (lower thresholds). It amends the European Council directive 96/82/EC concerning the management of risks related to major incidents with dangerous substances (so called "Seveso 2" directive) and could have a significant impact on EDF group's activities. In particular, this directive reduces the level of authorized quantities of carcinogenic or environmentally dangerous substances, for facilities generating, using or storing such substances. Accordingly, some of EDF's fossil-fired power plants could be subject to Seveso stricter regulations and therefore be imposed upon reinforced obligations in terms of safety and constitution of financial guaranties.

### SPECIFIC REGULATIONS FOR HYDROPOWER FACILITIES

Hydropower facilities are subject in France to the rules established by the French law of October 16, 1919, as amended. They require concessions granted by the Prime Minister (for facilities generating more than 100 MW) or by the *préfet* (for facilities generating between 4.5 MW and 100 MW), or authorizations attributed by the *préfet* (for facilities under 4.5 MW), (see section 6.2.1.1.4.4 ("Current and future hydropower generation issues") concerning hydropower concessions).

EDF's hydropower generation business is subject to water regulations. Such regulations relate to variations in water levels and flow rates, and to the safety of areas in the vicinity and downstream of the hydropower facility (see section 6.5.4.4 ("Other regulations relating to the environment, health, hygiene and safety")).

### CONDITIONS FOR THE RENEWAL OF HYDROPOWER CONCESSIONS

Pursuant to the French law of October 16, 1919, French decree n° 94-894 of October 13, 1994, as amended by the French decree n° 2008-1009 of September 26, 2008, specifies the conditions for the award or renewal of a concession. This decree includes the implementation terms of French law n° 93/122 of January 29, 1993 (known as the *loi Sapin*), which provide for a competitive tender procedure in the context of public service delegations. The former preference right for the incumbent concessionary has been suppressed by the amended Finance Act for 2006 because it did not comply with the competition procedures. The hydropower concessions, at the time of their renewal, are subject to an annual charge indexed according to the revenue from sales of electricity produced by the conceded hydropower structures, paid to the French State and allocated in part to the *départements* on the territory of which the water courses used flow. The Grenelle 1 law of August 2009 provided that the amount of this charge may be derestricted above 25%, threshold set by the amended Finance Act for 2006. The Grenelle 2 draft law, at the date of this *Document de Référence*, provides for a limit set on a case by case basis by the conceding authority, within each competitive situation. In the state of the draft law, a part of this charge would also be allocated to municipalities.

Decree 2008-1009 dated September 26, 2008 sets the rules and procedures for a hydropower concession request in a competitive market. It determines 3 criteria for the choice of the future concessionary: guarantee of the energy efficiency of the operation of the waterfall; respect of a balanced management of water resources; best economic and financial conditions for the licensor or conceding authority. The new procedure for the designation of a concessionary will now have a duration of 5 years (compared with 11 years currently).

### SPECIFIC REGULATIONS FOR WIND ENERGY GENERATION

In France, the construction of wind farms is subject, pursuant to Articles. R. 421-2 of the Urban Planning Code, to obtaining a construction permit for wind farms with a height equal to or greater than 12 meters. Setting up one or more wind turbines requires a preliminary public inquiry and an impact study if the height of the mast exceeds 50 meters. An impact notice is nonetheless required by Article L. 553-2 of the Environmental Code if the height is less.

Through the elaboration of the draft law "Grenelle 2", the Government has expressed its wish to change the regulation, so that wind power facilities are subject to the legal regime of Classified Facilities for the Protection of the Environment (*Installations Classées pour la Protection de l'Environnement*, or ICPE).

## 6.5.4.4 OTHER REGULATIONS RELATING TO THE ENVIRONMENT, HEALTH, HYGIENE AND SAFETY

### ENVIRONMENTAL REGULATIONS

#### "Grenelle 1" law

The planning law relating to the implementation of the Grenelle Environment Project, known as "Grenelle 1" of August 3, 2009, was published in the Official Journal of August 5, 2009, having been almost unanimously adopted.

Comprising 57 articles, the document groups together a number of general engagements and objectives for the medium and long term in terms of the environment, including the reduction of greenhouse gas emissions, energy efficiency, the development of renewable energy, the protection of biodiversity and natural environments, the prevention of risks to health and the environment and waste management. Furthermore, the law reinforces the role of environmental organizations and information and contains several clauses relating to corporate governance.

The majority of the provisions, however, remain outside of normative scope, the direction and objectives set by the legislator are realized in the bill on the national commitment to the environment, known as "Grenelle 2", adopted by the senate on October 8, 2009. The bill is scheduled to be submitted to the National Assembly and adopted during the first quarter of 2010.

#### Environmental liability law

The law of August 1, 2008, relating to environmental liability, transposed the EC directive 2004/35/EC of April 21, 2004, into law. The new measures (articles L. 160-1 to 165-2 of the environment Code) promote the prevention and remediation of serious environmental damage to water, soil and biodiversity. The remediation is only from an ecological point of view and must allow the natural environment to return to its previous state or an equivalent state. The new measures do not modify the legal regime of responsibility to third parties which remains in effect.

### The law concerning water and the aquatic environment

The law concerning water and the aquatic environment of December 30, 2006, which mainly aims at recovering the ecological quality of water streams and improving water management, includes several provisions which may concern EDF, but also allows to include in water management policy issues related to electric supply security and hydroelectric generation priorities.

Accordingly, certain restrictions will be increased, namely due to the increase of the minimum rate of flow on the downstream of dams, to the possibility of amending or canceling the operation permit if significant disturbances are caused to certain migrating fish by the operation of the site, or to changes in waterstream ranks to inhibit the construction of new sites or set forth instructions for the renewal of operation permits. Nevertheless, the minimum rate flow system will be less strict in some cases, namely for sites of state-of-the-art generation, and a certain flexibility in administrative proceedings has been organized in order to facilitate the set up of supplemental hydroelectric equipments.

The legislation also upgraded the legal status of various water management documents: the *Schémas d'Aménagement et de Gestion de l'Eau* (Water Development and Management Plans) have thus become actual regulations which can be enforced against all parties and may contain standards regarding the quality or quantity of water.

Regulation n° 1100/2007 of the Council dated September 18, 2007 instituting measures for reconstituting European eel stocks has been in force since September 25, 2007 and is directly applicable without any transposition. It imposes a duty on each Member State to rapidly prepare (submission to the Commission by December 31, 2008) plans for managing the eel population in each catchment area concerned. The purpose of the management plans is to reduce mortality levels caused by human activities and ensure that at least 40% of the eel biomass reaches the sea. Among the measures listed in the Regulation, management plans may include "structural measures so eels can cross rivers and improving habitats in water courses" and "temporary shut-down of hydropower station turbines".

The national management plan, integrating the measures taken on each catchment area, was submitted by the French State at the end of December. It is currently being examined by the Commission.

### PCB and PCT

The Group is subject to regulations relating to polychlorobiphenyls (PCB) and polychloroterphenyls (PCT) in the various countries where it operates, mainly in Europe.

European directive 96/59/EC of September 16, 1996 requires an inventory of equipment containing PCB and PCT, together with a national plan for decontamination and the gradual elimination of these substances, which are principally contained in certain electricity transformers and condensers. Decontamination of equipment containing these substances must be completed by December 31, 2010. In France, the national plan for the elimination and treatment of equipment containing PCB was approved by a Ministerial order dated February 26, 2003. For the approximately ten companies that have more than three hundred items of equipment, the special elimination plan for each of these companies (including EDF) is shown in Appendix 11 of the national plan. The individual plan to be implemented by EDF requires the treatment of a number of appliances each year, with all being treated as indicated above, at the latest by December 31, 2010.

### Greenhouse gases

Some of the EDF group's activities are subject to European directive 2003/87/EC (the "GHG directive") of October 13, 2003, which provides for a European system for exchanging greenhouse gas emission quotas, in accordance with the mechanisms set forth in the Kyoto Protocol. The directive provides, in particular, that greenhouse gas emission quotas must be affected to the operators of the relevant companies based on a "National Allocation Plan" (*Plan national d'allocation des quotas*, or "PNAQ"). In France, the GHG directive has principally been transposed by order n° 2004-330 of April 15, 2004 creating a greenhouse gas emission quota exchange system, and by the French decree n° 2004-832 of August 19, 2004 relating to the greenhouse gas emission quota exchange system. Under these regulations, a first PNAQ allocating greenhouse gas emission quotas to the relevant operators for the period from 2005 to 2007 was approved in France by the French decree n° 2005-190 of February 25, 2005, after approval by the European Commission. PNAQ II was approved by the decree dated May 15, 2007. It sets the total quantity of $CO_2$ quotas for this period at 132.8 Mt $CO_2$, the quantity of quotas allocated to the electricity sector at 25.6Mt, including 16.58 Mt $CO_2$ per annum for EDF. PNAQ II stipulates that operators may use, within the limit of 13.5% of the quotas allocated for their facilities, URE or REC (credits from project activities) to meet their quota restitution obligation. It announced the elimination of the option of reserving quotas between the periods 2005-2007 and 2008-2012, suppression confirmed by article 100 of the law n° 2007-1822 of December 24, 2007.

The order of May 31, 2007, establishes the list of operators allocated greenhouse gas emission quotas and their amounts for 2008-2012.

In order to compensate for the shortage of reserves, article 8 of the rectifying Finance Act for 2008 provides a reduction of the amount of quotas allocated to the electricity generation facilities, attributed by the PNAQ II (2008-2010) but not yet delivered as of December 31, 2008, by 10% in 2009, 20% in 2010, 35% in 2011 and 60% in 2012. The Finance law also provides that the quotas made available as described can be sold by the French State under the terms set forth in a decree issued by the *Conseil d'Etat*. The determination of how the reductions over the 2009-2012 period are allocated is made annually by decree, after consultation of the commission for the examination of the national plan for the allocation of greenhouse gas emission quota.

Decree n° 2009-231 of February 26, 2009 made under section 8 of Act III of the rectifying Finance Act for 2008, which included a reduction of 10% of the total quota for facilities of energy generation sector defined in the PNAQ II, was repealed by decree n° 2009-1557 of December 15, 2009; as this measure did not receive a favorable opinion of the European Commission. The repeal of the decree makes the provisions of Article 8 III of the Finance Act inapplicable to 2009.

European directive 2004/101/EC of October 27, 2004 (known as the "emissions credits" directive) modifying directive 2003/87 was implemented into French law, in articles L. 229-5 *et seq*. of the Environment Code, by French law n° 2005-1319 of October 26, 2005 and implementation decree n° 2006-622 of May 29, 2006. Emissions credits generated by project activities that are eligible for the mechanisms provided for by Articles 6 and 12 of the Kyoto protocol (Joint Implementation (JI) and Clean Development Mechanism (CDM)) may be used in the context of the European market for the exchange of greenhouse gas emission quotas, to satisfy, subject to certain conditions, the annual obligations of quota restitutions that are borne by operators.

The measures were supplemented by decree and order dated May 29, 2006, and an order dated March 2, 2007, describing the various stages of the national procedure for the approval of projects. Two separate approval procedures are provided for, depending on whether these are CDM or JI projects conducted outside France by French operators, or JI projects implemented in France by foreign or French operators, so-called domestic projects.

Thus the operators affected, including EDF, may, under certain conditions, have recourse to credits from these projects to comply with their annual quota restitution obligations for $CO_2$ emissions from their facilities. The quantity of quotas allocated to EDF for the second period is considerably reduced; hence the company must make wider use of these mechanisms to cover its emissions. The use of credits for this purpose has, however, been limited.

As of 2013, quotas will no longer be allocated free of charge, but all quotas allocated to the energy sector will be auctioned. EDF will therefore have to buy all quotas.

**Energy savings certificates (*certificats d'économie d'énergie*)**

The program law n° 2005-781 of July 13, 2005 setting guidelines for the energy policy and its implementing regulations include provisions on energy savings. The goal is to reduce by 2% on average per year by 2015 the final energy intensity, i.e., the ratio between energy consumption and GDP.

In this context, the Government has set targets of energy savings to the energy providers for the period 2006-2009. With the aim to meet its legal obligations, EDF has established a program of actions for energy savings, enabling it to obtain energy savings certificates in return. EDF can not guarantee that the actions undertaken by the Group for the control of the energy demand will be sufficient to achieve the future goals set by the Government. Indeed, the first period (2006-2009) being completed, public authorities will have to set new goals for the next period.

**Natural sites and classified sites (buried lines)**

The EDF group is also subject to the regulations for classified and protected sites, under which electricity lines in France must be buried if they are located on classified sites or in national parks.

**Environment protection by criminal law**

Multiple reasons, including a number of ecological catastrophes linked to maritime transportation, have led to the adoption of directive n° 2008/99/EC of November 19, 2008, relating to the protection of the environment through criminal law, with the principal objective of identifying acts of serious damage which must be punished by all Member States. The majority of offenses have already been prohibited by French law, but one new development is the suppression of acts "liable" to damage the environment. Regarding minimum penalties, the directive allows each Member State to set effective, proportionate and dissuasive criminal penalties.

### REGULATIONS RELATING TO HEALTH, HYGIENE AND SAFETY

**Asbestos**

The EDF group is also subject to laws and regulations concerning asbestos. In France, regulations namely require the identification of asbestos-containing materials ("ACM") in buildings and, if necessary, monitoring measures or removal of the asbestos-containing materials. EDF is also subject to regulatory obligations regarding information disclosure and the protection of workers likely to inhale asbestos dust.

**Legionella**

EDF operates air cooling towers, in particular, for the requirements of its electricity generation business, which are now subject to ICPE regulations. EDF must, among other obligations, carry out a methodical analysis of the risks of the proliferation of Legionella in its air cooling towers and implement a preventive maintenance plan for cleaning and disinfection. EDF is also obliged to carry out monthly or bimonthly analyses, depending on the type of facility involved. In the absence of any regulations relating to INB air cooling towers, the French NSA requested in 2004 that EDF not exceed, pending the adoption of a specific order, certain concentrations of Legionella in its air cooling towers. In June 2006, additional measures were also requested to reinforce the existing surveillance plan, together with the conduct of detailed feasibility studies for each site to strengthen measures for the prevention of legionella in the systems.

## 6.5.4.5 PRINCIPAL DRAFT REGULATIONS LIKELY TO HAVE AN IMPACT ON THE EDF GROUP'S BUSINESS

A number of draft regulations, both at the European Union level and in France, of which the principal ones are described below, are likely to have a significant impact on the EDF group's business.

### 6.5.4.5.1 FUTURE EUROPEAN UNION REGULATIONS

#### *6.5.4.5.1.1* The "Energy package"

EC directives 2009/72 and 2009/73 came into effect on September 3, 2009 and will have to be transposed into French law by March 3, 2011 at the latest.

The principal provisions of the "Third Energy Package", notably those of directive 2009/72/EC are centered on a number of key ideas:

(i) The independence of the transmission network managers must be guaranteed.

To comply with this requirement, the directive allows each Member State to choose between 3 options to separate production and supply activities from those of network management:

- straightforward separation of the transmission network manager's assets (Ownership Unbundling or OU), the EU preferred option that imposes on Member States the requirement to ensure that the same parties cannot exercise control over a supply company and simultaneously own a stake in, or exercise any rights over, a transmission network or transmission network manager. The reverse is also true : control exercised over a transmission network manager excludes the possibility of owning any stake in, or exercising any rights over a supply company;
- the Independent System Operator (ISO) allows vertically integrated companies to retain ownership of network assets, but requires the transmission network itself be managed by an independent network manager – an enterprise or entity separate from the vertically integrated company – which performs all the functions of a network manager. The directive also provides for the implementation of regulations and constant monitoring to guarantee the independence of the network manager from the vertically integrated company;
- the Independent Transmission Operator (ITO), the preferred option for France, preserves vertically integrated companies but requires them to comply with certain rules guaranteeing the separation of production/supply activities from the activities of the transmission network manager. In particular:
  (1) the rules guaranteeing the independence of the employees and management of the transmission network manager are reinforced by an enhanced regulatory role;
  (2) the ITO must be overseen by a supervisory body with responsibility for decision making that may have significant repercussions on the

value of shareholder's assets of the network transmission manager (decisions relating to the approval of the network transmission manager's annual financial plan, debt levels...). The supervisory body cannot make decisions on the everyday operational activities of the network transmission manager;

(3) the ITO should appoint a "compliance officer" with responsibility for governance of the ITO's compliance program.

(ii) The independence of national regulators should be reinforced and their powers enhanced as they are a key element in the efficient operation of the electricity market. A European agency for the cooperation of energy regulators should also be established.

The directive strengthens the independence of regulatory authorities by imposing firm co-operation between transmission network managers, necessary for the satisfactory integration of the gas and electricity markets.

Furthermore, the Third Energy Package establishes European Networks of transmission network managers, for electricity (ENTSO-E), and gas (ENTSO-G), with the aim of ensuring the sound technical development of the European electricity and gas transmission networks. Based on national network development plans, the ENTSO bodies should publish a 10 year network development plan with particular focus on identifying investment gaps in relation to cross-border capacity.

#### *6.5.4.5.1.2* The "Climate Package"

The climate package is a collection of measures to ensure that the European Union will meet its 2020 targets:

- 20% reduction in greenhouse gas emissions (GES – *gaz à effet de serre*);
- 20% increase in energy efficiency and 20% of energy consumption to come from renewable resources.

The climate package comprises 5 texts that were published in the Official Journal of the European Union (OJEU) on June 5, 2009:

1. Directive 2009/28/EC relating to the promotion of the use of energy from renewable sources, known as the ENR directive. The directive divides the 20% EU target of energy from renewable sources among Member States, taking into account the national energy mix, each Member State's potential and their GDP. France has been allocated a target of 23% of energy from renewable sources. By 2010, each Member State should establish a national action plan detailing appropriate measures to allow them to achieve their targets, and a roadmap for meeting their objectives in relation to renewable energy;
2. Decision n° 406/2009/EC on the effort of Member States to reduce their greenhouse gas emissions (GES). In the provisions of this document, France must reduce its greenhouse gas emissions by 14% in sectors not covered by the emissions trading scheme (ETS);
3. Directive 2009/29/EC amending the EU emissions allowance trading scheme. Of note among the main modifications to the scheme, in place since 2005, which shall be effective as from 2013, are the replacement of national emissions allowances with one unique Community allowance and an annual reduction in the total quantity of allowances, the extension of the scope of the scheme (definition of greenhouse gases and categories of activities), and the principle of auctioning of allowances that will progressively apply to certain sectors : full auctioning from 2013 for the energy sector, and for the remaining sectors, a progressive reduction in the free allocation until 2020;
4. Directive 2009/31/EC on the geological storage of carbon dioxide (CCS) This directive establishes a legal framework for the environmentally safe storage of $CO_2$ consisting of the capture of carbon dioxide ($CO_2$) from industrial installations, its transportation to a storage site and its injection into a suitable underground geological formation for the purposes of permanent storage. These activities are included in the revised EU emissions allowance trading scheme. In order to encourage the capture of $CO_2$ emissions from coal fired plants, the directive provides that the operator of a new plant must assess the feasibility of capture, transportation and storage of $CO_2$ emissions by its plant and, by 2020, all new plants must, if possible, be equipped with CCS technology. The directive describes the framework for geological storage, including a regime of exploration permits authorizing the exploration of underground formations and the subsequent use of the site for storage purposes, the realization of impact assessments, environmental inspections and the transfer of responsibility to the competent national authority after the closure of a storage site;
5. Decision relating to new State aid guidelines for environmental protection. The main objective of this decision is to acknowledge the priority given to the fight against climate change and the appropriate instruments deemed necessary to achieve this (energy efficiency, renewable energy, "Clean" technologies). It will allow for greater flexibility in the allocation of State aid.

Member States have 18 months to transpose to national law the provisions of the ENR and ETS directives and 24 months for the "storage" directive. The decision relating to the distribution of effort for the reduction of greenhouse gas emissions comes into immediate effect.

#### *6.5.4.5.1.3* Other future European regulations

***Environment***

Following the CAFE (Clean Air For Europe) program, launched in 2001 by the European Commission to improve the quality of air in Europe and the topical strategy on atmospheric pollution of September 21, 2005 (communication from the Commission to the Council and the European Parliament) setting out the integrated actions to be taken to reduce the harmful effects of atmospheric pollution on human health and the environment by 2020, a revision of European directive 2001/81/EC (NEC) setting national emission ceilings for certain atmospheric pollutants was initiated. The preliminary consultation phase is now complete; thus a proposal for a modifying directive was scheduled for publication by the Commission in February 2008, but this was postponed to an undetermined date, notably because of the EU's determination to take account of the "energy package" and difficulties linked to its distribution among Member States. The draft directive would in particular propose instituting a market for $SO_X$ and $NO_X$ emissions for Member States and tightening up national emission ceilings.

The European directive draft of October 24, 2005 which intends to create an European framework in order to protect and preserve the aquatic environment, sets forth that the States will determine the strategy for European maritime waters to obtain, by 2021, a good ecological level of the aquatic environment; monitoring programs and various measures will be adopted. Some of EDF's generation facilities (offshore wind turbines, sea-side power plants or even inland power plants if they can directly or indirectly affect the aquatic environment) could in time be subject to new restrictions.

The draft directive on environmental quality standards in the area of water, amending directive 2000/60/EC will establish environmental quality standards limiting the quantity of chemicals (called priority substances) presenting a significant risk to the environment or health in surface water (water courses, lakes, coastal waters) in the European Union. It will require Member States to ensure compliance with the standards. This obligation could give rise to more rigorous provisions concerning emissions and waste discharge from EDF plants.

As recommended in the sixth environmental action program, the European Commission published a draft directive defining a framework for the protection of soils on September 22, 2006, which was adopted by the European Parliament at its first reading on November 14, 2007. The European Council of Environmental Ministers, meeting on December 20, 2007, did not adopt this draft directive. Several States opposed it, including France, on the basis of the principle of subsidiarity. The draft seeks to define principles and actions common to all Member States for actively fighting deterioration of soils and preserving their capacity to fulfill their ecological, economic, social and cultural functions. The draft could be reissued at the initiative of the next EU Presidency.

The Commission has instigated the procedure for revising the IPPC directive ("Integrated Pollution Prevention and Control") of September 24, 1996 (which should be have been transposed by Member States by October 2007 in 2005 (public consultations, in particular, were conducted from May to June 2007)). On December 21, 2007 the European Commission adopted a communication on: "Improving policy on industrial emissions and a draft directive on industrial emissions" (integrated reduction and prevention of pollution). This draft directive revises and reworks, in a single legal text, several existing texts, including the IPPC, GIC, Waste Incineration, and VOC directives. The revision should lead to increased use of Best Available Technologies and extending the scope to other activities. The revised directive should come into force in 2016.

***Nuclear***

The Euratom Treaty celebration was an opportunity for European institutions to draw up an inventory of its applications. It emerged that the Parliament would like joint decision-making to be incorporated in the Euratom Treaty in order to be involved in the decision-making process. Nevertheless, the Community's knowledge of nuclear energy and its relatively recent role in the current energy and climate context were acknowledged, and the fundamental aspects of the Treaty should not be modified in the immediate future.

Moreover, a high-level group on nuclear safety and waste management comprising representatives of Member States and a representative of the Commission was created by the Council during spring 2007. It is responsible for identifying coordinated approaches and proposing recommendations on the safety of facilities and waste management, financing decommissioning, and the management of waste and spent fuel. Its work could eventually result in changes to EU nuclear regulations. The first meeting was held on October 12, 2007.

The Commission would like to harmonize the regimes of nuclear civil liability. It is currently conducting an impact study taking into account the Paris and Vienna Conventions and envisages preparing a "Community-wide" regime.

### 6.5.4.5.2 FUTURE REGULATIONS IN FRANCE

In autumn 2008, a Committee chaired by Paul Champsaur and composed of experts and members of the Parliament has been established by the Minister of Economy and the MEEDDEM with the mission to conduct an analysis to draw possible developments of the organization of French electricity market in order, simultaneously, to accelerate market opening to competition, create an incentive framework for the needed revival of investment in means of production and allow consumers to continue to benefit from the competitiveness of the electricity generated by EDF.

The Committee's conclusions, published in April 2009, are based on three ideas:

- at any supplier must be granted "an access right to baseload electricity at a regulated price reflecting the economic conditions of the established nuclear fleet for a volume proportional to its national client portfolio.";
- tariffs for industrial (yellow, green, TaRTAM) "will no longer be necessary once the upstream regulation and competition will ensure that industrial consumers access to electricity, reflecting the competitiveness of the generation fleet.";
- the regulated prices for domestic customers are not challenged.

In line with this report, the Government has begun drafting a bill that was handed down to the French Council of State at the end of March, for a final adoption by the Parliament announced at the end of the year 2010.

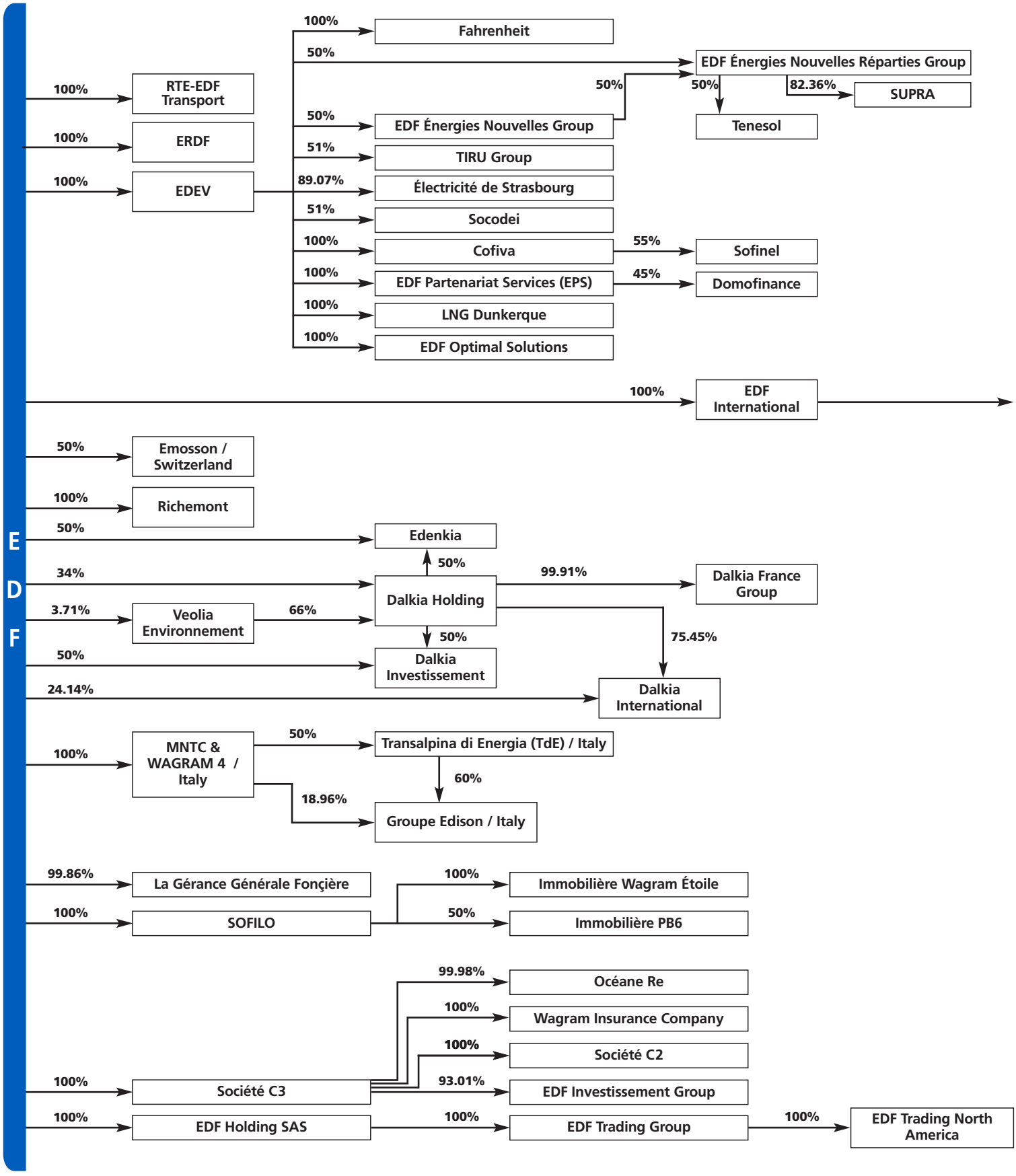
The Group will also be subject to European directive 2004/40/EC of April 29, 2004 concerning the minimum safety and health requirements as for what concerns employee exposure to risks due to physical agents (electromagnetic fields), which deadline for transposition has been postponed to April 30, 2012 by the directive 2008/46/EC. This directive sets forth the minimum requirements concerning risks evaluation and reduction, as well as requirements applicable to employee information and training.

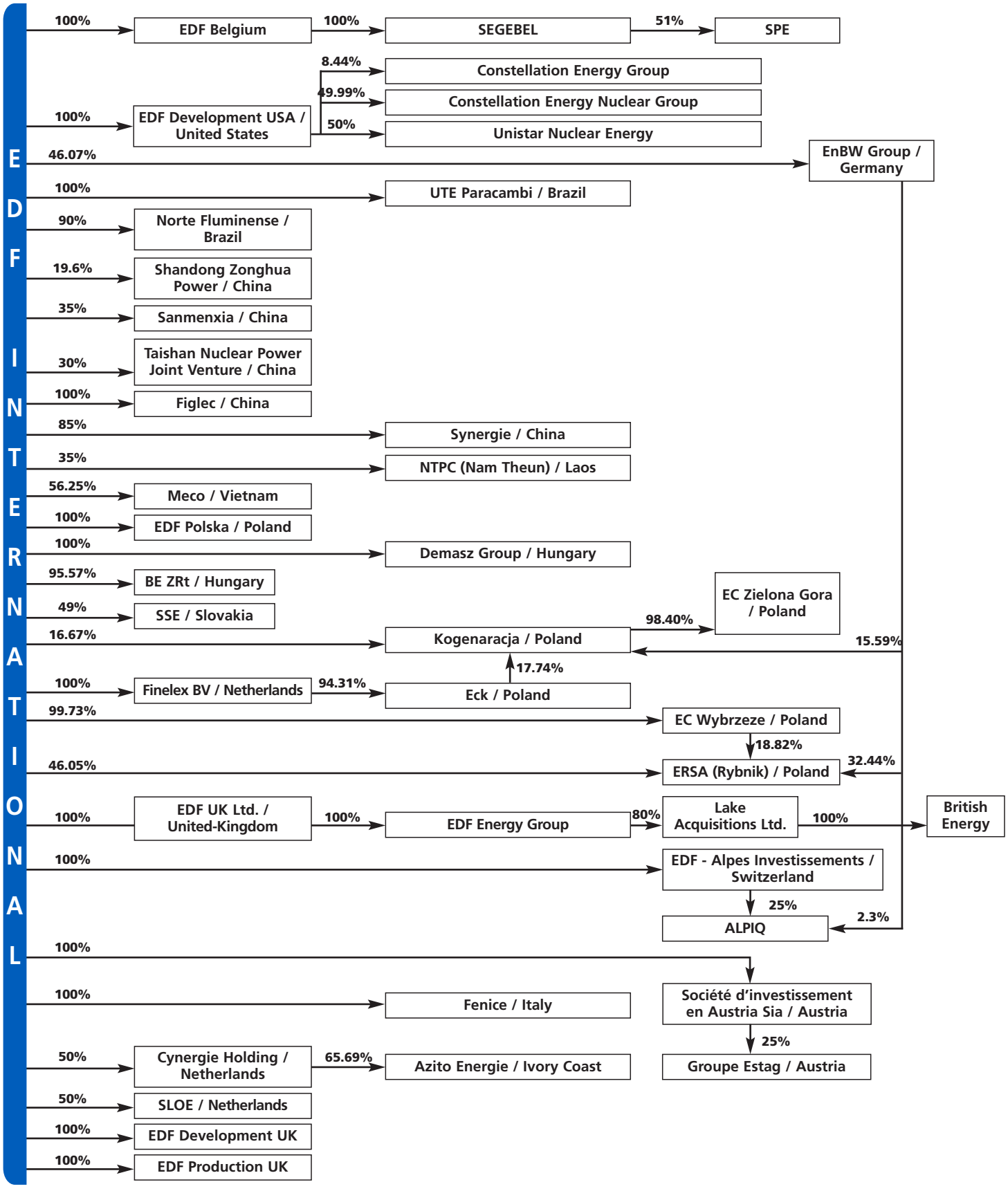
Such requirements will affect RTE and ERDF, taking into consideration the electromagnetic fields generated by lines or source stations during works whether under power or otherwise. They will also affect EDF's Generation-Engineering Division which employs electric maintenance employees close to the alternators placed near the exit of the generation plant.

The European directive 2006/32/EC of April 5, 2006, on energy efficiency in final utilizations and energy services, which sets forth a tentative goal for consumption reductions for Member States and leaves a significant place for the subsidiarity principle should have been transposed into French law before May 17, 2008. In addition to the specific effort of customers' information that the directive put on energy suppliers (invoicing and counting requirements), the energy suppliers role is left to Member States' assessment. To date, this directive has only been partially transposed in France.

# 7 Organizational structure

A simplified organizational chart for the Group, as of December 31, 2009, is presented below. The percentages for each entity represent the ownership interest in share capital.




EDF INTERNATIONAL
100%
EDF Belgium
100%
SEGEBEL
51%
SPE
8.44%
Constellation Energy Group
49.99%
Constellation Energy Nuclear Group
100%
EDF Development USA / United States
50%
Unistar Nuclear Energy
46.07%
EnBW Group / Germany
100%
UTE Paracambi / Brazil
90%
Norte Fluminense / Brazil
19.6%
Shandong Zonghua Power / China
35%
Sanmenxia / China
30%
Taishan Nuclear Power Joint Venture / China
100%
Figlec / China
85%
Synergie / China
35%
NTPC (Nam Theun) / Laos
56.25%
Meco / Vietnam
100%
EDF Polska / Poland
100%
Demasz Group / Hungary
95.57%
BE ZRt / Hungary
49%
SSE / Slovakia
16.67%
Kogenaracja / Poland
98.40%
EC Zielona Gora / Poland
15.59%
17.74%
100%
Finelex BV / Netherlands
94.31%
Eck / Poland
99.73%
EC Wybrzeze / Poland
18.82%
46.05%
ERSA (Rybnik) / Poland
32.44%
100%
EDF UK Ltd. / United-Kingdom
100%
EDF Energy Group
80%
Lake Acquisitions Ltd.
100%
British Energy
100%
EDF - Alpes Investissements / Switzerland
25%
ALPIQ
2.3%
100%
100%
Fenice / Italy
Société d'investissement en Austria Sia / Austria
25%
50%
Cynergie Holding / Netherlands
65.69%
Azito Energie / Ivory Coast
Groupe Estag / Austria
50%
SLOE / Netherlands
100%
EDF Development UK
100%
EDF Production UK

The names of all the companies within the Group's consolidation scope are mentioned in note 49 to the consolidated financial statements for the year ended December 31, 2009.

## INFORMATION ABOUT THE SUBSIDIARIES

For a description of the activities of EDF's subsidiaries, their recent acquisitions, their consolidated financial statements and/or their economic weight in the Group, see section 6.3 ("Presentation of the EDF group's International Activity") of this *Document de Référence*. In addition, note 8.1 to the consolidated financial statements for the year ended December 31, 2009, provides further financial information on the Group companies presented by operational areas.

## FUNCTIONS EXERCISED BY EDF'S MANAGERS

Functions exercised by EDF's managers in the Group's subsidiaries are set out in section 14.1.2 ("Personal information on members of the Board").

## CONTRACTS WITHIN THE GROUP

### CASH POOLING AGREEMENTS ENTERED INTO BETWEEN EDF AND ITS SUBSIDIARIES

Thanks to the system for cash pooling set up by EDF, all the cash positions of the subsidiaries can be centralized and the Group's liquidity can be optimized. This cash pooling consists in grouping all the cash balances of the subsidiaries with that of the parent company. It includes certain French and international subsidiaries. It does not include RTE.

The system for cash pooling in place for the companies of the EDF group is provided for by the liquidity agreements. Bilateral agreements between EDF and each subsidiary define the specific conditions for each arrangement, such as: remuneration of the balances, etc.

On the international level, subsidiaries taking part in the system enter into a framework agreement, whereby EDF serves as the Liquidity Center.

EDF also centralizes all the currency flows from its French subsidiaries.

### FINANCIAL FLOWS BETWEEN EDF AND ITS SUBSIDIARIES

Apart from the financial flows relating to cash pooling agreements mentioned above, financial flows between EDF and its subsidiaries also relate to distributions of dividends within the Group. A substantial part of the dividends paid by some of the Group's subsidiaries (including EnBW and EDF Energy) is exclusively paid to EDF International. All dividends received by EDF International in 2009 are approximately €476 million (dividends received in 2009 for the year ended December 31, 2008). EDF did not receive any dividends from EDF International for the same financial year but received approximately €707 million of dividends from its other consolidated subsidiaries.

Other financial flows between EDF and its subsidiaries are loans, asset transfers and guarantees effected by the parent company of the Group for the benefit of certain subsidiaries.

In the framework of this Group's financing centralization politic decided in 2006, EDF centralizes the financing of its English subsidiaries (excluding financing of regulated activities). EDF created in 2007 EDF Investissements Groupe which centralizes, in particular, medium and long term intra-group financing.

The financial flows relating to the fees paid by the subsidiaries are not significant. In effect, the Group's subsidiaries usually have their own central services and operate under their own brands.

A description of the financial flows relating to contracts between EDF and its subsidiaries is set forth in chapter 19 ("Related party transactions") below.

# 8 Property plant and equipment



## 8.1 Service sector real estate assets

The Real Estate Pole (which includes the Real Estate Division (*Direction de l'Immobilier*) and its real estate attached subsidiaries) is in charge in France of providing the Group entities with real estate services by managing and optimizing a real estate portfolio of nearly 4.4 million square meters of service premises, of which approximately 77% is owned outright by the Group and 23% is leased from third parties (leases and concessions).

The Real Estate Division is in charge of real estate assets' management, lease management, the technical use of the premises as well as of the maintenance of the premises and of the services provided to the space users, by creating a sub-lease system for Group entities and units. By taking leases from third parties, the Real Estate Division has taken commitments amounting for EDF to €632 million for the period 2010-2020.

## 8.2 Employers' Participation in the Construction Effort (*Participation des Employeurs à l'Effort de Construction, or "PEEC")*

EDF is subject to an obligation to participate each year in the construction effort. Its contribution was 0.45% of its payroll, which represented approximately €14.2 million for 2009.

In exchange for this payment, EDF's employees benefit from services intended to facilitate their residential mobility: assistance with renting, assistance with house purchase, assistance with mobility, advice on financing.

## 8.3 Subsidized home ownership loans

As part of its social policy, EDF supports its employees in purchasing their principal residence. Following the conclusion of a cooperation arrangement with the *Crédit Immobilier de France* ("CIF"), the latter now takes care of granting, financing, and managing loans to the company's employees. EDF grants compensation to the CIF for the gap resulting from the difference between the subsidized rate (at which CIF grants loans to EDF employees) and the rate resulting from the bank survey carried out in 2005 on the basis of which the CIF was chosen.

As of December 31, 2009, the "non-securitized", outstanding balance for personal residence mortgages was €7.8 million on EDF's balance sheet.

# Operating and financial review

9

# 9.1 Key figures

The figures presented in this document are taken from the EDF group's consolidated financial statements.

Key figures at December 31, 2009 are as follows:

## EXTRACTS FROM THE CONSOLIDATED INCOME STATEMENTS

| Years ended December 31 *(in millions of Euros)* | 2009 (2) | 2008 (1) | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 66,336 | 63,847 | 2,489 | 3.9 | -0.2 |
| Operating profit before depreciation and amortization (EBITDA) | 17,466 | 14,240 (3) | 3,226 | 22.7 | 1.2 |
| Operating profit (EBIT) | 10,107 | 7,910 | 2,197 | 27.8 | - |
| Income before taxes of consolidated companies (4) | 5,582 | 4,860 | 722 | 14.9 | - |
| Group net income | 3,905 | 3,484 | 421 | 12.1 | - |
| Net income excluding non-recurring items (5) | 3,923 | 4,392 | (469) | -10.7 (6) | - |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" (see notes 1 and 2 to the consolidated financial statements) and changes in presentation for Edison trading revenues.*

*(2) Figures for 2009 include the effects of first consolidation of British Energy from January 5, 2009, Constellation Energy Nuclear Group from November 6, 2009 and SPE from November 26, 2009.*

*(3) This amount includes the provision of €1,195 million established following prolongation of the transition tariff system (TaRTAM). Without this provision, 2008 EBITDA would amount to €15,435 million. 2009 EBITDA (which does not include the provision for prolongation of the TaRTAM system) was €2,031 million or 13.2% higher than 2008 (before including the TaRTAM provision).*

*(4) The income before taxes of consolidated companies corresponds to the EDF group's net income before income taxes, the share in net income of companies accounted for under the equity method, and minority interests.*

*(5) Net income excluding non-recurring items is not defined by IFRS, and is not directly visible in the consolidated income statements. It corresponds to the Group's share of net income excluding non-recurring items, net of tax (see § 9.6.9).*

*(6) -9.6% based on constant exchange rates and scope of consolidation.*

## EXTRACTS FROM THE CONSOLIDATED BALANCE SHEETS

| Years ended December 31 *(in millions of Euros)* | 12.31.2009 (2) | 12.31.2008 (1) |
|---|---|---|
| Non-current assets | 148,417 | 117,481 |
| Inventories and trade receivables | 32,295 | 28,434 |
| Other assets | 49,485 | 41,982 |
| Cash and cash equivalents and other liquid assets | 11,717 | 12,595 |
| **TOTAL ASSETS** | **241,914** | **200,492** |
| Equity (EDF share) | 27,952 | 23,197 |
| Minority interests | 4,773 | 1,801 |
| Specific concession liabilities | 39,884 | 38,516 |
| Provisions | 57,992 | 48,137 |
| Loans and other financial liabilities (3) | 54,213 | 37,071 |
| Other liabilities | 57,100 | 51,770 |
| **TOTAL EQUITY AND LIABILITIES** | **241,914** | **200,492** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" (see notes 1 and 2 to the consolidated financial statements).*

*(2) Figures for 2009 include the effects of first consolidation of British Energy from January 5, 2009, Constellation Energy Nuclear Group from November 6, 2009 and SPE from November 26, 2009.*

*(3) Including hedging derivatives and the liabilities of companies held for sale.*

## OPERATING CASH FLOW

| Years ended December 31 *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* |
|---|---|---|---|---|
| Operating cash flow (1) | 12,133 | 10,083 | 2,050 | 20.3 |

*(1) Operating cash flow is not defined by IFRS, and is not directly visible in the consolidated cash flow statements.*
*EDF uses the indicator "Operating cash flow" to assess the Group's capacity to generate free cash flow. This indicator, also known as "Funds From Operations" (FFO), is equivalent to net cash flow from operating activities (Cash flow statement) adjusted for the impact of non-recurring items excluding changes in working capital, less net financial expenses disbursed and income taxes paid.*

**NET INDEBTEDNESS**

| Years ended December 31<br>*(in millions of Euros)* | 12.31.2009 | 12.31.2008 | Variation | Variation<br>*(%)* |
|---|---|---|---|---|
| Loans and other financial liabilities | 53,868 | 37,451 | 16,417 | 43.8 |
| Derivatives used to hedge liabilities | 373 | (381) | 754 | -197.9 |
| Cash and cash equivalents | (6,982) | (5,869) | (1,113) | 19.0 |
| Liquid assets | (4,735) | (6,725) | 1,990 | -29.6 |
| Net financial indebtedness of companies included in non-current liabilities held for sale | (28) | - | (28) | n.s. |
| **NET INDEBTEDNESS** | **42,496** | **24,476** | **18,020** | **73.6** |

# 9.2 Economic environment and significant events

## 9.2.1 Economic environment

The widespread crisis in the international economy since autumn 2008 substantially affected demand for electricity in Europe (which was down by an average 3% in 2009 from 2008 levels), and prices for electricity and natural gas.

### 9.2.1.1 GDP GROWTH [1]

After a sharp slowdown in late 2008 that was even more marked in most countries in the first quarter of 2009, business levels in the advanced economies [2] stabilized in the second quarter of 2009 and improved in the third quarter (+0.5%), chiefly due to rescue plans and a return to normal on the financial markets. This recovery was not consistent across all economies, and some countries such as Spain and the United Kingdom are not yet out of recession.

The economic climate appeared to continue its general improvement in the fourth quarter.

GDP in OECD countries is expected to show a downturn of 3.6% in 2009 after 0.3% growth in 2008 (and +2.4% in 2007). In the **Euro zone**, a 3.9% decline in GDP is anticipated for 2009 after 0.5% growth in 2008 (and 2.7% growth in 2007).

In France, GDP should register a 2.3% decrease for 2009 after 0.3% growth in 2008 (+2.1% in 2007).

GDP's decline in the United Kingdom should reach 4.7% (annual average) for 2009 compared to a growth of 0.6% in 2008.

In Germany, GDP is expected to fall by 4.8% after a 1% rise in 2008.

The anticipated decrease in Italy's GDP is 4.9%, compared to a 1.0% decline in 2008.

### 9.2.1.2 TRENDS IN MARKET PRICES FOR ELECTRICITY AND THE PRINCIPAL ENERGY SOURCES

#### 9.2.1.2.1 WHOLESALE ELECTRICITY PRICES

**– Spot prices in France, Germany, the United Kingdom and Italy [3]**

Spot (next-day delivery) electricity prices in Europe were lower in 2009 than 2008, in line with price trends for fossil fuels and $CO_2$ emission quotas.

In **France**, average spot electricity prices for 2009 stood at €43/MWh baseload and €58.2/MWh peakload, down by 37.8% for baseload (-€26.1/MWh) and 36.6% for peakload (-€33.6/MWh) compared to 2008.

Consumption in France in 2009 was an average 1.6% [4] lower than in 2008, mainly due to the economic slowdown. Electricity output was below 2008 levels, principally as a result of longer outages for nuclear units following industrial action in the spring, and technical issues at certain units concerning alternators and steam generators.

In **Germany**, 2009 spot prices averaged €38.9/MWh baseload and €51.42/MWh peakload, a decrease of 40.9% (-€26.9/MWh) and 41.9% (-€36.9/MWh) respectively from 2008 levels. This downturn was more pronounced than in France due to the more plentiful supply in Germany. Spot prices (baseload) were lower in Germany than France by an average of €4.2/MWh in 2009 and €3.4/MWh in 2008.

1. Source: Note de conjoncture INSEE, December 2009. Forecasts are estimates issued by INSEE.
2. Countries belonging to the OECD (Organization for Economic Cooperation and Development).
3. France: Average previous day Powernext price for same-day delivery; Germany: Average previous day EEX price for same-day delivery; United Kingdom: Average previous day Platts OTC price for same-day delivery; Italy: Average previous day GME (PUN) price for same-day delivery.
4. Source: RTE, electricity report 2009.

In the **United Kingdom**, the average 2009 spot prices were €41.1/MWh baseload and €50/MWh peakload, approximately 55% lower than in 2008 for both baseload (-€48.9/MWh) and peakload (-€63.7/MWh).

This sharper fall than in France and Germany is attributable to the significant downturn in gas prices during 2009. Spot prices were also brought down by lower $CO_2$ emission quota prices and the more restricted impact of constraints under the European Large Combustion Plant directive (LCPD) as a result of depollution investments in the UK.

In **Italy**, baseload spot prices followed a similar trend, retreating by 25.9% from 2008 levels to an average of €63.7/MWh. This less severe decrease compared to other European countries is principally explained by the more limited fall in gas prices: in Italy, gas contract prices are generally calculated based on sliding averages over a period of up to 6 months.

### – Forward prices in France, Germany, and the United Kingdom (1)

After the wide fluctuations in 2008, forward electricity prices were more stable in 2009, registering an average decrease of over 30% between 2008 and 2009. They generally followed the same trends as fossil fuel and $CO_2$ emission quota prices.

In **France**, the average price under the 2010 annual contract was €51.7/MWh baseload and €72.4/MWh peakload, 30.2% lower than in 2008.

The 2010 annual contract baseload price fell sharply during the first two months of 2009, falling on February 25 to its lowest-ever level of €43.8/MWh, before recovering from March onwards and stabilizing at between €47/MWh and €55/MWh in the second half of the year. In the final two months of 2009 the 2010 annual contract reflected movements in the price of the "1st quarter 2010" contract, which was affected by fluctuations in market actors' expectations regarding the supply-demand balance for the coming winter.

In **Germany**, the 2010 annual contract price followed the same pattern as in France. It stood at €49.2/MWh baseload in 2009, down by 30% from 2008.

The contract price differential between France and Germany remained stable in the first three quarters of 2009: French prices were higher by an average of €2/MWh. The differential rose significantly at the end of the year to reach €7/MWh in early November, before falling back to €3.5/MWh by December 31. This high volatility reflects the influence of French spot prices on the 2010 annual contract at the end of the year. In Germany, in contrast, forward prices echoed the decline in fossil fuel prices constantly throughout the second half of 2009.

In the **United Kingdom**, the 2009 April Ahead baseload contract price moved in line with gas and $CO_2$ emission quota prices. It decreased throughout the second half of the year due to falling gas prices, reaching an average €45.7/MWh at December 31, 2009.

#### 9.2.1.2.2 $CO_2$ EMISSION QUOTA PRICES (2)

The price of $CO_2$ emission quotas for delivery in December 2010 was 42.2% lower than the previous year, at an average €13.4/t. The economic crisis caused a slowdown in industrial production, resulting in lower $CO_2$ emissions and a corresponding significant decline in quota prices.

#### 9.2.1.2.3 FOSSIL FUEL PRICES

| | Natural gas *(p/th)* | Coal *($/t)* | Oil *($/bl)* |
|---|---|---|---|
| Price at December 31, 2008 | 58.8 | 86 | 45.6 |
| Price at December 31, 2009 | 46.3 | 87.3 | 77.9 |
| Average % change 2009/2008 | -36.2 | -40.2 | -36.5 |
| Highest in year | 60.4 | 97.5 | 79.7 |
| Lowest in year | 33.1 | 70.5 | 39.6 |
| Average for year | 47 | 83.5 | 62.7 |

Forward prices for **coal** (3) (Europe API 2 index) dropped by 40.2% in 2009 to an average $83.5/t. This decrease results from a strong rise in stocks, which reached record levels in Europe due to the falling demand for coal since the second half of 2008. It also caused a decline in international trade that brought maritime freight prices down. Forward coal prices were less volatile in 2009 than in 2008: they varied between $70/t and $100/t over the whole year.

The average price of **oil** (4) (Brent) for 2009 was $62.7/barrel, down by $35.9/barrel from 2008. Two distinct phases were visible in 2009. From January to March, prices stagnated around the low point of close to $45/barrel reached after the fall caused by the economic crisis during the second half of 2008. There were then signs of a recovery from April in the US and the Asia-Pacific region, and an upturn in prices ensued. Oil prices ended the year at $77.9/barrel.

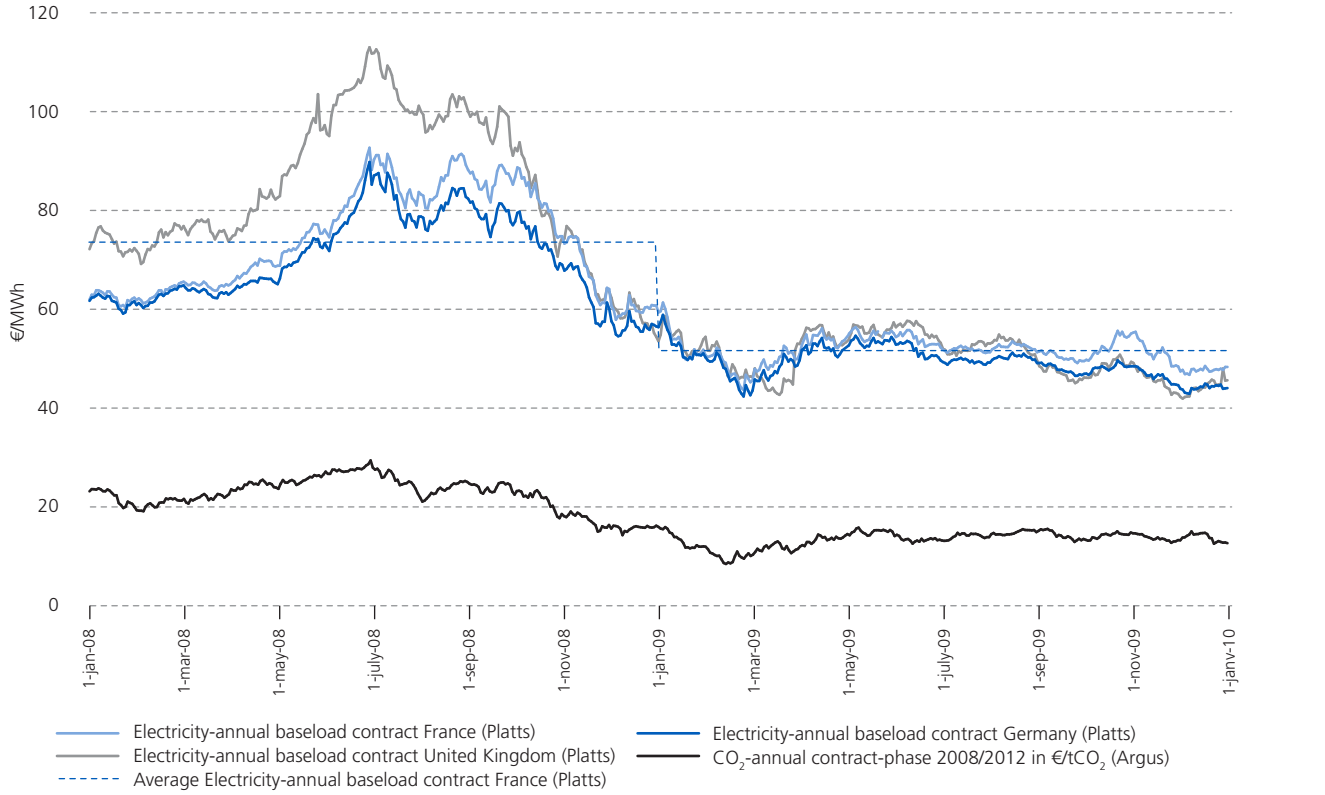
**Natural gas** (5) prices under the United Kingdom's annual contract averaged 47 p/therm in 2009, down by 36.2% from 2008. In contrast to other energy commodity prices which bounced back in the second half-year, natural gas prices followed a downward trend all year, as a result of:

- lower industrial demand, leading to a build-up of large stocks;
- higher supply levels as several methane terminals began operations off the British coast.

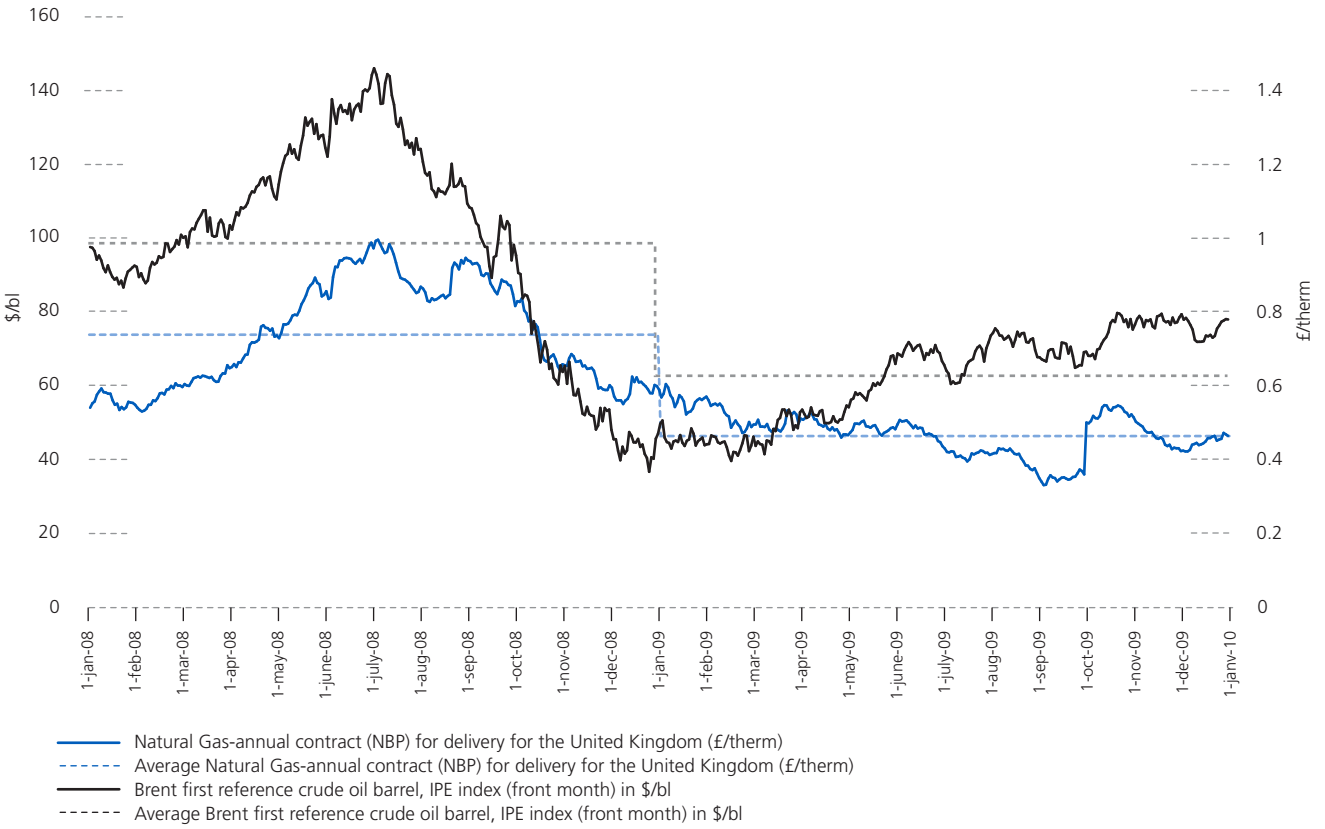
Gas prices for the North British Pool stood at 46.3 p/therm at December 31, 2009.

1. France and Germany: Platts average 2009 annual contract price; UK: Platts average annual contract prices from April 2008 then April 2009 (in the UK, annual contract deliveries take place from April 1 to March 31 following the NETA calendar). There is no forward electricity market in Italy.
2. Average Argus index for the first annual contract of Phase II (2008-2012).
3. Average Argus index for the first annual contract, delivery in Europe (CIF ARA).
4. Brent first reference crude oil barrel, IPE index (front month); USD per barrel.
5. Platts average index, for delivery starting from October of the following year for the UK (NBP); pence per therm.

**FORWARD ELECTRICITY PRICES IN FRANCE, GERMANY AND THE UNITED KINGDOM AND $CO_2$ EMISSION QUOTA PRICES (PHASE II, 2008-2012)**




**NATURAL GAS AND BRENT OIL PRICES, 2008-2009**



### 9.2.1.3 ELECTRICITY CONSUMPTION [1]

National electricity consumption in France for 2009 totaled 486.4 TWh, 1.6% lower than for 2008. The decline eased off in late 2009: consumption for November and December was higher than in the same months of 2008, when the effects of the economic crisis were already perceptible.

Electricity consumption was down by 8.6% from 2008 for large industrial customers, and 3% for small and medium business customers.

In contrast, consumption by customers connected to low-voltage supply (residential customers, professional customers, public authorities, public lighting, and various services) was up by 2% (in line with the 3% increase between 2007 and 2008).
Peakload consumption in winter continued to show marked growth.

Estimated national electricity consumption is expected to have decreased in 2009 by almost 7% in the **United Kingdom** (approximately 320 TWh), 5.5% in **Germany** (approximately 518 TWh) and 6.7% in **Italy** (approximately 290 TWh).

### 9.2.1.4 ELECTRICITY AND NATURAL GAS SALES TARIFFS

In **France**, electricity sales tariffs were raised on August 15, 2009 by 1.9% for the "blue" tariff, 4% for the "yellow" tariff and 5% for the "green" tariff.

The average rise for all these tariffs was thus 2.7% excluding the TaRTAM transition tariff system.

The new network access tariff scales (TURPE 3) adopted by the French Government in a decision of June 5, 2009 following a proposal by the regulator CRE came into effect on August 1, 2009.

This tariff enables ERDF and RTE to finance investments and implement a targeted quality improvement programme at ERDF and a mechanical safety programme at RTE. It also provides an incentive for both companies to raise performance levels and encourage energy efficiency.

The new tariffs will apply for 4 years from August 1, 2009, with immediate rises of 2% for transmission network use and 3% for supply network use.
The TURPE 3 tariff is indexed to inflation for each year of the period 2010-2012.

In the **United Kingdom**, after increasing electricity tariffs by 17% and natural gas tariffs by 22% in July 2008, EDF Energy lowered electricity tariffs for residential customers and small and medium business customers by 8.8% from March 31, 2009.

For distribution tariffs, on December 23, 2009 EDF Energy agreed to the energy regulator Ofgem's price reduction proposals for the period April 1, 2010 to March 31, 2015.

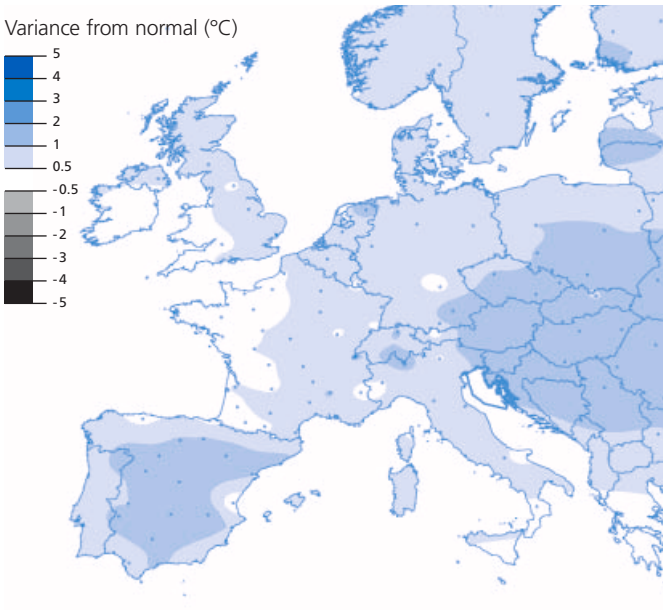
In **Germany**, following a rise in its basic electricity price by an average 4.9% from July 1, 2008, with guaranteed stability for one year, EnBW increased its "EnBW Komfort" basic electricity price (applicable to some 1.5 million customers) by 7.5% on July 1, 2009. This increase also applies from January 1, 2010 to customers who opted for a special tariff.

In the natural gas business, after a 19.7% price rise on November 1, 2008, EnBW reduced its basic "ErdgasPlus" gas tariff three times in 2009. The total reduction was 22.1%.

### 9.2.1.5 WEATHER CONDITIONS

#### 9.2.1.5.1 TEMPERATURES

**TEMPERATURE VARIANCE FROM NORMAL LEVELS, JANUARY TO DECEMBER 2009 [2]**

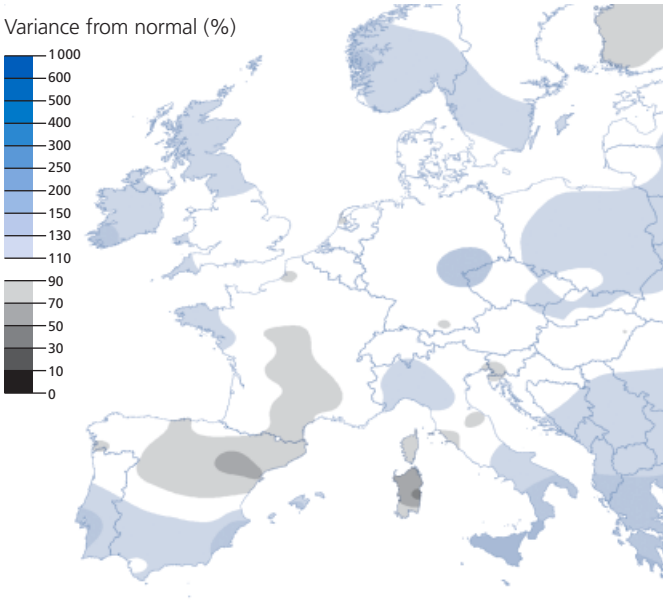



The weather was an average 0.3°C milder in France in 2009 than 2008 despite distinctly colder temperatures in January and February (respectively -4.1°C and -2.2°C lower). In the middle of the year 2009 from March to October, average temperatures were more in line with normal seasonal levels. November 2009 was milder than normal (+2.0°C) while the second half of December was colder, but overall, the final quarter was milder than normal seasonal levels (+0.5°C) and the corresponding period of 2008 (+1.4°C).

1. For countries other than France, estimates are supplied by local EDF subsidiaries.
2. Source: Météo France. Map comparing average temperature to normal levels measured over 30 years (1971-2000 for Western Europe and 1961-1990 for Eastern Europe).

### 9.2.1.5.2 RAINFALL

**RAINFALL: JANUARY TO DECEMBER 2009 (1)**




In France, rainfall was higher than normal over the first five months of 2009, particularly in the Southern Alps and the Pyrenees, and near-normal in the Massif Central and the Northern Alps. Between July and October a significant shortfall in precipitation gradually spread across the country as a whole, especially in September. Rainfall was generally in short supply over the year as a whole and as a result, EDF's hydropower capability was below normal in 2009 (by about 10% compared to past averages).

## 9.2.2 Significant events (2) (3)

### 9.2.2.1 STRATEGIC DEVELOPMENTS

The EDF group carried out several major strategic transactions in 2009: completion of the acquisition of British Energy in the UK and the partnership with Centrica leading to the takeover of SPE in Belgium, acquisition of 49.99% of the nuclear generation and operation assets of Constellation Energy Group (CEG) in the US, and the investment in the new Swiss entity Alpiq. These operations should place the Group among the leaders in the worldwide nuclear renewal.

Besides, there has been a substantial increase in operational investments across all of the Group's activities.

#### 9.2.2.1.1 DEVELOPMENT OF NUCLEAR ACTIVITIES WORLDWIDE

##### *9.2.2.1.1.1* France

***Flamanville EPR***

Work continued during 2009 on construction of the new Flamanville 3 reactor, due to be commissioned in 2012 and to produce its first electricity for sale on the market in 2013.

***Penly (Normandy) EPR project***

On May 1, 2009, it was announced that the Penly EPR would be constructed by EDF through a company formed for that purpose, and that GDF SUEZ will participate in the operation. The capital structure will be as follows: EDF will hold 50% plus one share, and GDF SUEZ will hold 33.33% plus one share. GDF SUEZ will decide with Total on the potential transfer of some of its investment. EDF will decide whether to involve other electricity operators (principally Enel) in the project through the residual 16.66% of the capital.

##### *9.2.2.1.1.2* United Kingdom

The successful friendly takeover bid in January 2009 for **British Energy**, UK's leading electricity producer, was a key step forward in the EDF group's development in the UK and nuclear activities worldwide.

In connection with this transaction, EDF entered into an **agreement with Centrica**, under which Centrica acquired a 20% holding in British Energy for £2.3 billion and EDF acquired Centrica's indirect 51% stake in **SPE** for £1.2 billion (€1.3 billion).

EDF and Centrica set up an 80/20 joint venture for pre-development of a nuclear renewal programme in the UK. The two companies' objective is to build and operate four EPR-type nuclear reactors due to be commissioned successively from 2017.

***Exercise by Eggborough plant bondholders of their purchase option***

On August 25, 2009, a banking consortium that had provided financing for British Energy's acquisition of the Eggborough coal-fired plant in 2000 announced that it would exercise its option to buy the plant in compliance with the "Share Option Agreement" signed with British Energy in 2005. Ownership is due to be transferred on March 31, 2010.

##### *9.2.2.1.1.3* United States

Once all the required authorizations had been issued by the US Federal and Maryland State authorities, EDF (through its wholly-owned subsidiary EDF, Inc.) and Constellation Energy Group finalized EDF, Inc.'s investment in Constellation Energy Nuclear Group, LLC (CENG) on November 6, 2009 under the financial terms as initially agreed. CENG owns Constellation Energy Group's nuclear assets in the US.

On completion of this operation, the EDF group acquired 49.99% of Constellation Energy Group's nuclear generation and operation assets (representing a total of 3.9 GW) for $4.6 billion (€3.1 billion), of which €0.7 billion was paid in 2008.

##### *9.2.2.1.1.4* China

In November 2007, EDF and the Chinese electricity producer China Guangdong Nuclear Power Corp. (CGNPC) signed an agreement to enable EDF to become an investor and operator in China, through a 30% holding in a company formed to construct, own and operate two nuclear reactors using EPR technology at Taishan, in the province of Guangdong. After signature in Beijing in August 2008 of the final agreements for the new company's formation, the Taishan Nuclear Power Joint Venture Company (TNPJVC) came into existence on December 21, 2009 after the Chinese authorities had approved the transaction. This company is the tangible expression of EDF's involvement in the project as partner and shareholder.

1. Source: Météo France. Map comparing average rainfall with normal levels over 30 years (1971-2000 for Western Europe and 1961-1990 for Eastern Europe).
2. Significant events related to litigation are described in chapter 15.
3. Developments in the economic environment are described in section 9.2.1.

The first concrete for the plant's unit 1 was successfully poured in late October 2009.

Taishan's two nuclear units are scheduled for commissioning in 2013 and 2015.

#### *9.2.2.1.1.5* Italy

EDF and Enel entered into an industrial partnership on February 24, 2009 to develop nuclear power in Italy.

Under this partnership, EDF and Enel set up a 50/50 joint venture ("Sviluppo Nucleare Italia SRL") to carry out feasibility studies for construction of at least 4 EPRs in Italy, and signed an agreement to extend Enel's involvement in France's new nuclear programme, including participation in the construction and operation of the new EPR at Penly directed by EDF.

#### *9.2.2.1.1.6* AREVA-EDF agreement for spent fuel management (1)

On December 19, 2008, EDF and AREVA signed a long-term agreement for industrial cooperation (2040), concerning removal of all EDF's spent fuel, the technical and financial conditions of transportation, processing and recycling of the spent fuel (2008-2012), and the amount of the payment for decommissioning of AREVA's plant at La Hague.

The amounts and timing of the installments of this payment were agreed in July 2009, and the agreement is being finalized.

Negotiations on the principles for application of other points of the main agreement have been completed on February 5, 2010. These principles should be implemented in the operating contract for 2008-2010 shortly.

### 9.2.2.1.2 STRENGTHENING EDF'S EUROPEAN POSITIONS

#### *9.2.2.1.2.1* United Kingdom

***Acquisition of the British Energy group***

In addition to enabling EDF to play a significant role in renewal of nuclear power in the UK (see section 9.2.2.1.1.2 above), this acquisition will reinforce the balance between EDF Energy's front-end and back-end activities.

***Electricity distribution networks***

As part of its drive to reduce financial indebtedness by at least €5 billion by the end of 2010, EDF announced on October 2, 2009 that it had begun to examine the options for changes in ownership of its British electricity distribution networks.

#### *9.2.2.1.2.2* Germany

***EnBW acquires 26% of EWE***

On July 21, 2009 EnBW purchased 26% of EWE (one of Germany's largest energy operators, based in the north of the country) for the sum of approximately €2 billion (EDF's share: around €1 billion).

***Reinforcement of the Group's generation capacities in Germany***

EnBW significantly reinforced its generation capacities in Germany in 2009:

- in May 2009 EnBW purchased E.ON's 50% share in the Lippendorf coal-fired power plant and its 8.3% share in the Bexbach coal-fired power plant;
- on September 30, 2009, EDF, EnBW and E.ON signed agreements for exchanges of drawing rights and electricity generation assets representing more than 1,200 MW between France and Germany. Under the terms of these agreements, EnBW acquired drawing rights for 800 MW of nuclear energy in Germany from E.ON's nuclear portfolio, a majority shareholding in the Rostock power plant, *i.e.* a capacity of 256 MW, and a drawing right for 159 MW from E.ON's Buschhaus coal-fired plant. In return, E.ON acquired drawing rights to 800 MW of nuclear power in France based on EnBW's historic drawing rights from EDF's nuclear power output, and EDF (together with longstanding 16.25% shareholder Charbonnages de France) transferred its 18.75% investment in SNET to E.ON;
- on October 1, 2009, EnBW acquired the residual 16.7% (159 MW) of the Bexbach plant from STAWAG, and now owns 100% of the plant's capacity (714 MW).

As a result of these transactions, as well as the acquisition of three onshore windfarms in Germany, EnBW increased its generation capacity by almost 1,100 MW in 2009.

#### *9.2.2.1.2.3* Switzerland

***Changes in EDF's investment in Alpiq Holding SA (formerly Atel Holding SA), new leader in Switzerland's energy industry***

In application of the agreements signed in December 2008, by the end of January 2009 EDF held a direct 25% share in the new Swiss energy operator Alpiq Holding SA, formed by the merger between Swiss energy groups Atel and EOS.

The total cost of the operation for EDF was CHF 1,058 million (close to €705 million), partly financed by a contribution of energy drawing rights deriving from EDF's 50% share in the Emosson dam, valued at CHF 722 million. The balance was paid in cash.

#### *9.2.2.1.2.4* Benelux

***SPE***

On November 12, 2009, the European Commission approved the acquisition by EDF of Centrica's 100% investment in Segebel, which owns 51% of SPE, the second-largest Belgian electricity producer.

This approval was issued at the end of a "Phase 1" procedure, subject to commitments by EDF to sell one of its two combined cycle gas (CCG) projects under development in Belgium. The EDF group also undertook to sell its other Belgian combined cycle gas plant project after June 2012, but only if construction has not begun on the first project by then. SPE is fully consolidated in the EDF group's financial statements from the date of acquisition of Segebel by EDF Belgium, i.e. November 26, 2009.

1. Drawn up on February 3, 2010.

***Industrial commissioning of a CCG plant in the Netherlands***

EDF and Delta N.V., 50/50 joint owners of a 870 MW CCG plant in the Netherlands, commissioned the plant's two units on October 20 and December 13, 2009. Each partner firm is entitled to 50% of electricity output.

#### *9.2.2.1.2.5* Austria

In June 2009 EDF raised its interest in Austrian energy supplier ESTAG from 20% to 25%. ESTAG is now proportionally consolidated in the Group's financial statements.

#### *9.2.2.1.2.6* Developments in the natural gas business

The Group continued its strategy to secure gas supplies throughout 2009.

***Edison***

On January 15, 2009, Edison signed an agreement with the Egyptian Government and EGPC for the exploration, production and development rights for the **Abu Qir gas fields**, thereby increasing its hydrocarbon reserves by 27 billion $m^3$. The annual natural gas output at Abu Qir is 1.5 billion $m^3$. On March 31, 2009 Edison announced that new hydrocarbon resources had been discovered at Abu Qir, with the potential to increase production levels by approximately 30% compared to the date of the announcement.

Edison also put the **Rovigo** regasification terminal (Italy) into operation in late August 2009. This offshore terminal belongs to Adriatic LNG, in which Edison holds a 10% investment (the other shareholders are Qatar Petroleum 45% and ExxonMobil 45%). Edison holds the rights to 80% of the terminal's regasification capacity and expects to receive 6.4 $Gm^3$/year of LNG from RasGas II (Qatar).

***Partnership with Gazprom***

On November 27, 2009, **EDF and Gazprom** signed a memorandum of understanding giving EDF the opportunity to participate in construction of the offshore section of the **South Stream gas pipeline**. The Memorandum states that EDF's involvement in South Stream will entail conclusion of new long-term natural gas supply contracts, and specifies cooperation opportunities in the electricity sector both in and outside France.

On October 20, 2009, the trading subsidiaries of EDF and Gazprom announced that they had signed an agreement for deliveries of natural gas between the US and Europe, covering volumes of 0.5 $Gm^3$ over the next 5 years.

### 9.2.2.1.3 REINFORCING RENEWABLE ENERGIES AND ENVIRONMENTALLY-FRIENDLY TECHNOLOGIES

#### *9.2.2.1.3.1* EDF Énergies Nouvelles

The Group is continuing its development in renewable energies, particularly windpower and photovoltaic solar power, through its subsidiary EDF Énergies Nouvelles (EDF EN), which aims to have net installed capacity of 4,200 MW by the end of 2012, including 500 MW of photovoltaic power. In the field of **wind power**, EDF EN increased its wind generation capacity by 619 MW during 2009, bringing the total gross windpower capacity to 2,650 MW. Newly commissioned facilities were mainly located in the US (253 MW), France (105 MW), Italy (57 MW), Turkey (45 MW), Greece (38 MW), Mexico (38 MW), the UK (34 MW) and Belgium (30 MW).

EDF EN also continued to step up **development in photovoltaic solar power**, commissioning 60 MWp during the year, primarily in France, Italy and Canada. By the end of 2009, EDF EN's total gross installed capacity was 81 MWp, with a further 139 MWp under construction.

To support its solar power development, EDF EN signed a strategic agreement on July 23, 2009 with the world's leading photovoltaic solar panel manufacturer First Solar, for construction of a solar panel factory in France (to produce more than 100 MWp a year).

EDF EN will provide half of the financing for building the facility, and will benefit from its entire output for the first ten years of operation, for its own requirements.

#### *9.2.2.1.3.2* Renault-Nissan and EDF consolidate their cooperation on zero-emission electric vehicles

The two partners entered a new stage in development of the electric vehicle due to be put on the road by 2011.

On June 22, 2009 EDF and Renault signed an agreement on a charging system providing secure communication of data between recharge terminals and vehicles.

#### *9.2.2.1.3.3* EDF invests in supercritical coal-fired electricity generation technology in China

In October 2009 the EDF group acquired a 35% holding in the Datang Sanmenxia Power Generation Company (DSPC) project, a supercritical coal-fired power plant with two 600 MW units (Sanmenxia Phase II) at Sanmenxia in Henan province, China, for approximately €35 million.

#### *9.2.2.1.3.4* EDF and the Russian electricity company INTER RAO sign a framework agreement for energy efficiency

In late 2009, EDF and the electricity operator Inter Rao signed a framework agreement under which the two groups will examine the feasibility of asset swaps and cross-investments in energy efficiency projects in Russia.

## 9.2.2.2 BUSINESS IN FRANCE

### 9.2.2.2.1 NUCLEAR GENERATION

Nuclear generation produced 390 TWh in 2009, 28 TWh or 6.7% less than in 2008 (418 TWh). The 28 TWh variance is explained by:

- industrial action, which caused longer outages of certain units, particularly in the second half of the year, and output loss due to reduced power levels at units in operation; this accounted for some 17 TWh of the decrease (net of modulation avoided) in nuclear generation over the year as a whole;
- several unscheduled or extended shutdowns, mostly occurring in the second half of the year and relating to defects in equipment (steam generators, alternators, transformers) already due for replacement, scheduled in some cases for 2010. This factor accounted for some 6 TWh of the fall in nuclear power output;
- shutdown of units at the Blayais plant in France during the first quarter of 2009 after the Klaus cyclone blew vegetation and mud into the Gironde river, and reduced power at the Cruas plant when the cooling system became clogged up in November 2009. These events accounted for some 3 TWh of the fall in nuclear power output;

- the 2008 leap year effect, meaning that 2009 output was automatically one day or approximately 1 TWh lower; and,
- more frequent use of modulation, which reduced nuclear output by some 1 TWh.

Nuclear generation expressed in terms of the Kp coefficient or "load factor"(1) thus stood at 70.7% in 2009, lower than 2008 (75.3%). This factor is obtained by multiplying the 2009 Kd (availability coefficient) of 78%, down by 1.2 point from 2008, by the 2009 Ku (utilization factor) of 90.6%, down by 4.6 points from 2008.

#### 9.2.2.2.2 STORMS IN SOUTH-WEST FRANCE

Several areas of south-west France were hit by exceptionally fierce storms early in 2009, particularly the Klaus cyclone.

These storms caused damage estimated at approximately € 160 million, essentially affecting the distribution subsidiary ERDF.

### 9.2.2.3 REGULATORY ENVIRONMENT (FRANCE)

#### 9.2.2.3.1 MARKET DEVELOPMENTS

**– Hydropower concessions**

Article 7 of the French law n° 2006-1772 of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the French law n° 2006-1771 of December 30, 2006, amending the 2006 Finance Act, sets out the principle of an indemnity for the outgoing operator in respect of the unamortized portion of investments made during the second half of the agreement (the final 10 years at least), with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree n° 2008-2009 of September 26, 2008 clarified the terms of indemnification for work carried out prior to its publication during the second half of the concession. As required by this decree, EDF submitted a statement of the relevant expenses for approval early in 2009, and its claim is currently being processed by the Ministry of Ecology, Energy, Sustainable Development and the Sea.

In view of these changes in regulations, the depreciation schedule has been modified from January 1, 2009 for facilities that are to be returned for nil consideration at the end of the concession and do not qualify for an indemnity. Depreciation for these items has been accelerated over the residual term of the concession when it is shorter than their technical useful life.

This has led to an additional € 13 million expense for 2009.

#### 9.2.2.3.2 THE CHAMPSAUR COMMISSION; PROPOSED LAW ON THE NEW ORGANIZATION OF THE FRENCH ELECTRICITY MARKET

In preparation for changes in the competitive environment on the French energy markets, the French Government charged on October 24, 2008 a commission presided by Paul Champsaur to *"reflect on the tariff framework and desirable legislative and regulatory changes to provide France with a clear, stable framework for the French electricity market that will protect consumer interests and contribute to the opening up of the European electricity market* (2)*."*

On April 27, 2009, the Champsaur Commission released a report containing a number of proposals to make the electricity market more competitive both upstream and downstream. One of its recommendations was "*assigning every supplier the right of access to baseload electricity at a regulated price that reflects the economic conditions of the established fleet of nuclear plants, for a volume proportional to its customer portfolio on national territory*".

A draft law concerning the new organization of the French electricity market is expected to be submitted to the French parliament during 2010.

#### 9.2.2.3.3 FRENCH LAWS ON URBAN SOLIDARITY AND RENEWAL – TOWN PLANNING AND HABITAT

The implementation provisions for the sections of the French solidarity and urban renewal law (SRU – *Solidarité Renouvellement Urbains*) and town planning and habitat law (UH – *Urbanisme et Habitat*) concerning connection to the public electricity distribution network introduced a new system on January 1, 2009 with the following main features:

- definition of connection operations, separating network extension from network connection, with clear identification of the beneficiaries (local authorities in charge of town planning and connected customers);
- establishment of a single price scale for all connection operations (approved by the regulator CRE (*Commission de Régulation de l'Énergie*) on March 27, 2008);
- direct inclusion of part of the connection price in the delivery tariff, applying a reduction rate (set forth in the decision of July 17, 2008) to the basic price scale;
- the portion invoiced to beneficiaries is now named "contribution" and replaces the previous systems of connection fees, participations and assets contributed for no consideration by fitters. Contributions are treated as sales for the period concerned.

### 9.2.2.4 GOVERNANCE

#### APPOINTMENT OF HENRI PROGLIO AS CHAIRMAN AND CEO

The directors' new terms of office began on November 23, 2009, when the first meeting of the new Board took place. Six directors representing employees were elected on May 19, 2009, six directors were chosen by the shareholders at the General Meeting of November 5, 2009, and the appointment of six directors representing the French Government by decision of November 18, 2009 was published in France's Official Gazette (*Journal Officiel*) on November 19, 2009.

Upon the nomination proposed by the Board of Directors to the French President on November 23, 2009, Henri Proglio was appointed EDF Chairman and CEO by decree of November 25, 2009 published in the Official Gazette of November 27, 2009. He succeeds Pierre Gadonneix.

1. "Kp" or "load factor". This factor is obtained by multiplying two coefficients (Kp = Kd x Ku): the availability factor, Kd (available energy, i.e. the theoretical maximum energy less output losses caused by technical reasons inherent to the plant (scheduled outages, unplanned outages due to damage or for safety reasons and regulatory testing), as a percentage of the theoretical maximum energy; a utilization factor, Ku (the energy generated as a percentage of the energy available). Ku reflects environmental and social constraints, supply of system services, and optimization implemented by EDF (fuel and modulation). For more details, see section § 6.2.1.1.3.3 of the *2008 Document de Référence*.
2. Mission Letter, October 24, 2008.

## 9.2.2.5 HUMAN RESOURCES

### SUPPORT MEASURES FOR THE REFORM OF THE SPECIAL ELECTRICITY AND GAS SECTOR (IEG) PENSION SYSTEM IN FRANCE

As part of the IEG pension reform that came into force on July 1, 2008, in accordance with the principles set forth in the French Pension Guideline Document, an agreement was signed on January 29, 2008 defining the main support measures for the changes. Some of these measures were applied as of January 1, 2009 or during the year 2009; they concern:

- mandatory sector-specific complementary welfare provision, which came into effect on January 1, 2009;
- the additional pension scheme introduced by the EDF group in application of the sector-specific agreement of February 21, 2008, which also came into effect on January 1, 2009;
- the group's collective pension fund plan (*Plan d'Épargne Retraite Collectif* – PERCO), introduced at EDF on September 21, 2009.

Negotiations concerning the way the system will take into consideration the specificities of different businesses were completed in late 2009. The resulting agreement can be signed until February 28, 2010.

Negotiations are also under way in the IEG sector for additional healthcare coverage, which should be implemented in 2010.

In accordance with the "Social Agenda" for 2008-2010 signed with all the unions on July 10, 2008, negotiations during 2009 concerned:

**– Total remuneration:**

- housing support for new employees: the agreement applicable at EDF SA was signed on June 19, 2009, and increases the amount and period of the moving bonus for newly-hired employees;
- the service pay-cheque (CESU) system set up on February 24, 2009 by EDF and the CMCAS Coordination Committee to help employees with childcare expenses for children aged between 3 months and 3 years. This is exempt from employer social contributions and taxes, up to a limit of € 1,830 per employee per year;
- the additional savings plan contribution: the rules for the additional contribution made by EDF to the Group's savings and pension fund plans are specific to each Group company and defined in the Savings Plan rules or membership agreements. They are amended by collective negotiation in each firm. The agreement signed on July 17, 2009 sets the relevant rules for EDF's payments in connection with and the PERCO pension fund plan;
- in 2009, an amendment also was made to the Time Savings Account (*Compte Épargne Temps* – CET) agreement of April 2, 2008 to allow rights earned to be converted into monetary form and paid into the PERCO pension fund plan.

**– Flexible working time and quality of life in the workplace:**

- in accordance with the law, negotiations took place in 2009 on the question of employment of older people, leading to implementation of an action plan;
- negotiations are currently under way at EDF concerning management/executive working hours.

These measures are determined in a company agreement and will be put into action in 2010.

### 2008-2010 PROFIT SHARE

EDF's 2008-2010 voluntary profit share agreement was signed on June 13, 2008. A supplementary collective profit share bonus was paid in 2009 under the terms of the agreement and in application of article L. 3314-10 of the French Labor Code.

## 9.2.2.6 GROUP FINANCING

The EDF group raised € 18.9 billion on the bond markets during 2009.

In the course of the year, EDF undertook several bond issues in amounts of € 9.9 billion in Euros (EUR), € 1.7 billion in pounds sterling (GBP - £1.5 billion), € 3.6 billion in US dollars (USD - $5.0 billion), € 0.9 billion in yen (JPY - ¥ 120.4 billion) and € 0.4 billion in Swiss francs (CHF 0.6 billion).

In January 2010, the company also issued $2.25 billion of bonds on the US market pursuant by Rule 144A of the US Securities and Exchange Commission (SEC): a $1.4 billion tranche at the fixed rate of 4.6% maturing in 10 years, and a $0.85 billion tranche at the fixed rate of 5.6% maturing in 30 years.

These issues contribute to the financing of the Group's investment strategy, and repayment of the £11 billion bank loan subscribed in September 2008 for the acquisition of British Energy. This loan was used in January 2009 and fully repaid in September 2009.

EnBW also undertook a € 1.35 billion bond issue, mainly to finance the acquisition of EWE. Edison raised € 700 million on the bond market to fund its development. Finally, on November 12, 2009, EDF Energy Networks (LPN) plc. issued a £300 million bond maturing in November 2016, EDF Energy Networks (EPN) plc. issued a £350 million bond maturing in November 2036, and EDF Energy Networks (SPN) plc. issued a £300 million bond maturing in November 2031.

Details of these bond issues can be found in note 39 to the consolidated financial statements at December 31, 2009.

## 9.2.2.7 MAIN CHANGES IN THE SCOPE OF CONSOLIDATION

The main changes in the scope of consolidation during 2009 are described in note 7 to the consolidated financial statements at December 31, 2009, "Changes in the scope of consolidation".

# 9.3 Introduction to analysis of 2009 results

Pursuant to European regulation 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended December 31, 2009 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2009. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The consolidated financial statements for 2009 contain comparative information for the financial year 2008, which has been restated to reflect the effect of application of revised IAS 23, "Borrowing costs", and changes in the presentation of revenues from Edison's trading operations.

The accounting and valuation methods applied by the Group (including changes from 2008) are presented in notes 1 and 3 to the consolidated financial statements for the year ended December 31, 2009.

# 9.4 Principal accounting methods sensitive to the use of estimates and judgments

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, and positive and negative contingencies at year-end. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

The principal sensitive accounting methods involving use of estimates and judgments are described in note 3.2 to the consolidated financial statements at December 31, 2009. Given their importance in the EDF group's financial statements, the impact of any change in assumption in these areas could be significant.

# 9.5 Segment reporting of financial information

Segment reporting presentation complies with IFRS 8, "Operating segments", which replaced IAS 14 from January 1, 2009.

In accordance with IFRS 8, the breakdown used by the EDF group corresponds to the operating segments as regularly reviewed by the Management Committee.

The breakdown used by the EDF group for geographical areas is as follows:

- "**France**", which refers to EDF and its subsidiaries RTE EDF Transport and ERDF, comprising the deregulated activities (mainly Generation and Supply), network activities (Distribution and Transmission) and island activities;
- "**United Kingdom**", which comprises the entities of the EDF Energy subgroup including British Energy and EDF Development UK Ltd.;
- "**Germany**", which refers to the entities of the EnBW subgroup;
- "**Italy**", which covers all the entities located in Italy (the Edison subgroup, TDE and Fenice);
- "**Other International**", which covers other gas and electricity entities located principally in continental Europe (including Benelux) but also in the USA, Latin America and Asia, and EDF International;
- "**Other activities**", which groups together all the Group's other investments, including EDF Énergies Nouvelles, EDF Trading, Électricité de Strasbourg, Dalkia, Tiru, and EDF Investissements Groupe.

The effects of introducing this new segmentation from January 1, 2009 are limited, and mainly concern reassignment of entities from the former "Rest of Europe" and "Rest of the World" segments between the new segments "Other International" and "Other activities".

Segment information for 2008 has been restated according to the new segments.

Segment information for the EDF group is reported in note 8 to the consolidated financial statements at December 31, 2009.

# 9.6 Analysis of the consolidated income statements for 2009 and 2008

| Years ended December 31<br>*(in millions of Euros)* | 2009 (2) | 2008 (1) |
|---|---|---|
| Sales | 66,336 | 63,847 |
| Fuel and energy purchases | (26,558) | (26,590) |
| Other external expenses | (11,231) | (10,258) |
| Personnel expenses | (11,452) | (10,476) |
| Taxes other than income taxes | (2,917) | (3,171) |
| Other operating income and expenses | 3,288 | 2,083 |
| Prolongation of the TaRTAM – law of August 4, 2008 | - | (1,195) |
| **Operating profit before depreciation and amortization (EBITDA)** | **17,466** | **14,240** |
| Net depreciation and amortization | (6,976) | (5,714) |
| Net increases in provisions for renewal of property, plant and equipment operated under concessions | (490) | (526) |
| Impairments/Reversals | (66) | (115) |
| Other income and expenses | 173 | 25 |
| **Operating profit (EBIT)** | **10,107** | **7,910** |
| **Financial result** | **(4,525)** | **(3,050)** |
| **Income before taxes of consolidated companies** | **5,582** | **4,860** |
| Income taxes | (1,614) | (1,599) |
| Share in income of companies accounted for under the equity method | 120 | 367 |
| **GROUP NET INCOME** | **4,088** | **3,628** |
| Minority interests | 183 | 144 |
| **EDF NET INCOME** | **3,905** | **3,484** |
| **Earnings per share** *(in Euros)* | **2.14** | **1.91** |
| **Diluted earnings per share** *(in Euros)* | **2.14** | **1.91** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" and changes in presentation for Edison trading revenues (see notes 1 and 2 to the consolidated financial statements).*

*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *Constellation Energy Nuclear Group from November 6, 2009;*
- *SPE from November 26, 2009.*

The Group's net income excluding non-recurring income and taxes amounted to €3,923 million in 2009 (€4,392 million in 2008).

## 9.6.1 Sales

### 3.9% rise in consolidated sales; organic degrowth of 0.2%

| *(in millions of Euros)* | 2009 | 2008 (1) | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| **France** | **34,004** | **34,264** | **(260)** | **-0.8** | **-0.8** |
| United Kingdom | 11,036 | 8,244 | 2,792 | 33.9 | 3.6 |
| Germany | 7,195 | 7,467 | (272) | -3.6 | -4.3 |
| Italy | 4,877 | 5,610 | (733) | -13.1 | -12.5 |
| Other International | 3,437 | 3,044 | 393 | 12.9 | 10.6 |
| Other activities | 5,787 | 5,218 | 569 | 10.9 | 9.9 |
| **Total excluding France** | **32,332** | **29,583** | **2,749** | **9.3** | **0.4** |
| **GROUP SALES** | **66,336** | **63,847** | **2,489** | **3.9** | **-0.2** |

*(1) Adjusted for changes in the presentation of Edison's trading revenues.*

The **EDF group's consolidated sales** totaled €66,336 million for 2009, a rise of 3.9% compared to 2008 including negative foreign exchange effects of -€1,170 million or -1.8%. These were essentially attributable to the fall of the pound sterling, and to a lesser extent the Polish and Hungarian currencies, against the Euro.

The effects of changes in the scope of consolidation totaled €3,788 million (+5.9%), and were mainly associated with the acquisition of British Energy. Excluding these effects, the organic change in sales (1) stood at -0.2%.

In **France**, sales showed organic decline of 0.8% in 2009.
The fall in electricity sales volumes (-3.7 percentage points) attributable to the economic slowdown and the relatively low output was partly offset by the positive impact (+2.1 percentage points) of tariff rises in August 2008 and 2009 and expanding natural gas and services activities (+0.8 percentage points).

The Group made 51.3% of its sales in France in 2009 compared to 53.7% in 2008.

Sales **outside France** (the United Kingdom, Germany, Italy, and the Other international and Other activities segments) registered a 9.3% increase, including the activities of British Energy.

Excluding the effects of changes in the scope of consolidation and exchange rates, sales outside France were stable despite the impact of the recession on volumes.

Boosted by positive price and tariff effects, sales rose in the UK in 2009 (3.6% organic growth), but the effects of the economic slowdown were particularly visible in Germany (organic degrowth of 4.3%) and above all in Italy (organic decline of 12.5%).

The high increase in sales by the Other International segment (organic growth of +10.6%) is principally attributable to Poland, and to a lesser extent Belgium and Brazil.

The rise in sales by the Other activities segment (organic growth of 9.9%) mainly results from business growth at EDF Énergies Nouvelles and Dalkia. It also includes adjustments related to hedging instruments.

The Group made 48.7% of its sales outside France in 2009 compared to 46.3% in 2008.

1. The change in Group business that does not incorporate the positive or negative effects of changes in the scope of consolidation (acquisitions or disposals of subsidiaries), or in exchange rates or accounting methods.

## 9.6.2 EBITDA

### Consolidated EBITDA up by 22.7%, with organic growth of 1.2%

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 66,336 | 63,847 | 2,489 | 3.9 | -0.2 |
| EBITDA | 17,466 | 14,240 | 3,226 | 22.7 | 1.2 (1) |

*(1) Excluding the impact of the TaRTAM provision recorded in 2008 (€1,195 million).*

**Consolidated EBITDA** for 2009 amounted to € 17,466 million, up by 22.7% from 2008 corresponding to organic growth of 1.2%.
This increase was driven by business outside France, particularly in the UK.

The effect of changes in the scope of consolidation reflects the first consolidation of British Energy (€ 1,728 million), and the acquisitions of Constellation Energy Nuclear Group in the US and SPE in Belgium. Foreign exchange effects totaled - € 145 million (-1.0%) and result from unfavorable developments in the pound sterling and the Hungarian and Polish currencies against the Euro. Also, in 2008 a € 1,195 million provision was booked following prolongation of the TaRTAM transition tariff system, with no equivalent in 2009.

Excluding the impact in 2008 of prolongation of the TaRTAM transition tariff system, EBITDA for 2009 stands at € 17,466 million, 13.2% up from 2008 (€ 15,435 million).

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| **France** | **9,434** | **9,009** | **425** | **4.7** | **-9.0** |
| United Kingdom | 3,062 | 943 | 2,119 | 224.7 | 51.3 |
| Germany | 1,193 | 1,114 | 79 | 7.1 | 5.9 |
| Italy | 801 | 911 | (110) | -12.1 | -13.5 |
| Other International | 686 | 505 | 181 | 35.8 | 22.6 |
| Other activities | 2,290 | 1,758 | 532 | 30.3 | 25.1 |
| **Total excluding France** | **8,032** | **5,231** | **2,801** | **53.5** | **18.8** |
| **GROUP EBITDA** | **17,466** | **14,240** | **3,226** | **22.7** | **1.2** |

In France, EBITDA rose by 4.7%. Excluding the effect of prolongation of the TaRTAM, it was down by 9.0%, mainly as a result of lower nuclear power output, and to a lesser extent the storms of January.

France contributed 54.0% of consolidated EBITDA in 2009 (63.3% in 2008).

Outside France, EBITDA progressed by 53.5% including the effect of consolidation of British Energy in 2009. Excluding changes in the scope of consolidation and foreign exchange effects, organic growth of 18.8% was driven by performances in the United Kingdom and central European countries, as well as EnBW's resilient performance in a regional environment affected by a serious economic slowdown.

The Group's EBITDA/sales ratio for 2009 stood at 26.3% compared to 22.3% in 2008. The rise was most noticeable in the United Kingdom (27.7% in 2009 against 11.4% in 2008) with the impact of the consolidation of British Energy, and to a lesser extent in the Other activities segment (39.6% in 2009 against 33.7% in 2008), largely due to significant expansion by EDF Énergies Nouvelles.

#### 9.6.2.1 FUEL AND ENERGY PURCHASES

**Fuel and energy purchases** amounted to € 26,558 million in 2009, stable compared to 2008 and showing organic degrowth of 1.5%.

In **France**, fuel and energy purchases increased by 6.5%, mostly due to the higher cost (after hedging) of energy purchases to compensate for electricity losses from the networks, and the increase in purchases associated with expanding natural gas sales.

In the **United Kingdom**, the rise was € 219 million or 3.9% (organic degrowth of 3.2%). This was largely attributable to the impact of fair value measurement of hedging derivatives under IAS 39, which was positive in 2009.

In **Germany**, there was a 8.8% organic decline in energy purchases, which decreased more than sales due to the favourable effect of the hedging policy.

In **Italy**, the organic change in fuel and energy purchases was -13.9%, in line with the lower sales levels.

In the **Other International** segment, these purchases increased by 6.2% including the effects of changes in the scope of consolidation (acquisition of SPE and change in consolidation method for ESTAG). The organic growth of 8.0% is comparable to the rise in sales.

In the **Other activities** segment, the increase in fuel and energy purchases stood at 3.3%, with organic growth of 1.2%.

### 9.6.2.2 OTHER EXTERNAL EXPENSES

**Other external expenses** amounted to €11,231 million, €973 million (+9.5%) higher than in 2008 reflecting organic growth of 4.1%.

This increase is principally attributable to the **United Kingdom** (+€494 million) with the first consolidation of British Energy, and **France** (+€513 million) due to the cost of network repairs after the storms of January 2009, acceleration of generation plant maintenance, and development of new activities.

In **Germany** and **Italy**, other external expenses were down by 6.3% and 11.3% respectively.

The increase registered by the **Other international** segment (+42.5%) results chiefly from proportional consolidation of ESTAG since July 1, 2009 (this company was accounted for under the equity method in 2008).

### 9.6.2.3 PERSONNEL EXPENSES

**Personnel expenses** totaled €11,452 million, €976 million (+9.3%) more than in 2008, corresponding to organic growth of 5.0%.

In **France**, the 4.8% rise reflects changing pay levels for practically stable employee numbers, and greater employee protection associated with the pension reform. It also includes the additional expenses caused by the storms.

**Outside France**, personnel expenses increased by 22.4% including the effect of consolidation of British Energy. Organic growth outside France was 5.7%.

Organic growth in personnel expenses was 7.3% in the **United Kingdom** due to the larger workforce and, to a smaller degree, pay rises. In **Germany**, the 8.5% organic rise mainly reflects pay rises and an increase in the workforce.

### 9.6.2.4 TAXES OTHER THAN INCOME TAXES

**Taxes other than income taxes** stood at €2,917 million for 2009, down by €254 million (-8.0%) from 2008. Most of the decline is concentrated in France (-€196 million) and essentially relates to the reversal of €324 million from the FACE [1] provision for the contribution to electrification work in rural areas after introduction of the TURPE 3 new network access tariffs. In the Other International segment, this decrease also includes the €61 million effect of excise duty reform in Poland since March 1, 2009 (transfer of the tax from generators to distributors).

### 9.6.2.5 OTHER OPERATING INCOME AND EXPENSES

**Other operating income and expenses** generated income of €3,288 million in 2009, €1,205 million higher than in 2008 (€2,083 million excluding the provision for the prolongation of the TaRTAM transition tariff). Most of this rise is attributable to France, where it essentially results from the increase in the Contribution to the public electricity service (CSPE – *Contribution au service public de l'électricité*) following the decline in spot electricity prices (+€799 million). In the United Kingdom, other operating income and expenses rose by +€493 million, chiefly due to fair value measurement of British Energy's electricity sale contracts.

## 9.6.3 EBIT

### 27.8% INCREASE IN EBIT

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| **EBITDA** | **17,466** | **14,240** | **3,226** | **22.7** | **1.2** |
| Net depreciation and amortization | (6,976) | (5,714) | (1,262) | 22.1 | 4.9 |
| Net increases in provisions for renewal of property, plant and equipment operated under concessions | (490) | (526) | 36 | -6.8 | -7.0 |
| Impairment/reversals | (66) | (115) | 49 | -42.6 | -59.1 |
| Other income and expenses | 173 | 25 | 148 | n.s. | n.s. |
| **OPERATING PROFIT (EBIT)** | **10,107** | **7,910** | **2,197** | **27.8** | **3.2** |

EBIT totaled €10,107 million for 2009, up by 27.8% from 2008, with organic growth standing at 3.2%.

This mainly reflects the increases in EBITDA, "Net depreciation and amortization" (largely resulting from the first consolidation of British Energy) and "Other income and expenses" (mainly related to the gain on the transfer to Alpiq of Emosson dam drawing rights).

1. *Fonds d'Amortissement des Charges d'Électrification*.

### 9.6.3.1 IMPAIRMENT

The €49 million improvement in impairment is explained by the fact that there was no equivalent in 2009 to impairment booked in 2008.

### 9.6.3.2 OTHER INCOME AND EXPENSES

Other income and expenses resulted in net income of €173 million in 2009, against €25 million in 2008.

## 9.6.4 Financial result

| *(in millions of Euros)* | 2009 | 2008 (1) | Variation | Variation *(%)* |
|---|---|---|---|---|
| Cost of gross financial indebtedness | (2,709) | (1,657) | (1,052) | 63.5 |
| Discount expense | (3,229) | (2,797) | (432) | 15.4 |
| Other financial income and expenses | 1,413 | 1,404 | 9 | 0.6 |
| **GROUP TOTAL** | **(4,525)** | **(3,050)** | **(1,475)** | **48.4** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

The financial result for 2009 was -€4,525 million, -€1,475 million (+48.4%) lower than in 2008, principally due to the following factors:

- the €1,052 million rise in the cost of gross indebtedness resulting from the higher average gross indebtedness;
- the €432 million increase in discount expenses, essentially in the United Kingdom as a result of consolidation of British Energy, and to a lesser degree in France (pensions).

## 9.6.5 Income taxes

**Income taxes** amounted to €1,614 million in 2009 compared to €1,599 million in 2008.

The effective tax rate is 28.9% for 2009, compared to 32.9% for 2008.

## 9.6.6 Share in income of companies accounted for under the equity method

The Group's share in income of companies accounted for under the equity method was €120 million in 2009, €247 million lower than in 2008. This decrease essentially results from non-recurring items in 2008 in the United Kingdom (€77 million) and at Dalkia (€63 million) and the changes in the scope of consolidation concerning Germany and Austria.

## 9.6.7 Minority interests

Minority interests amounted to €183 million in 2009, €39 million more than in 2008. This increase mainly results from the expansion of EDF Énergies Nouvelles and the consolidation of SPE.

## 9.6.8 Group share of net income

**The Group share of net income** was €3,905 million for 2009, 12.1% higher than in 2008 (€3,484 million), when it included the effect of prolongation of the TaRTAM transition tariff system.

## 9.6.9 Net income excluding non-recurring items

The Group's **net income excluding non-recurring items**(1) stood at €3,923 million in 2009, €469 million (-10.7%) lower than in 2008.

Based on a constant scope of consolidation and exchange rates, it declined by 9.6%.

## 9.6.10 Net indebtedness(2)

The Group's net indebtedness rose by €18,020 million, from €24,476 million at December 31, 2008 to €42,496 million at December 31, 2009.

1. Group net income excluding non-recurring items.
   Non-recurring items, net of taxes, in 2009: -€18 million: +€220 million of reimbursement by the State following cancellation of the European Commission decision of December 16, 2003, and -€238 million of gains and losses on asset disposals, impairment of investments and operating assets, and provisions.
   Non-recurring items, net of taxes, in 2008: -€908 million: -€783 million relating to prolongation of the TaRTAM transition tariff system, €23 million relating to pensions in France, and -€148 million of gains and losses on asset disposals, impairment of investments and operating assets, and provisions.
2. Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets comprising funds and interest rate instruments with initial maturity of over three months, that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

# 9.7 Breakdown of EBIT by geographical area

The EDF group's segment reporting principles are presented in note 8 to the consolidated financial statements at December 31, 2009.

The breakdown of EBIT by geographical segment is as follows:

| 2009 *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other International | Other activities | Total |
|---|---|---|---|---|---|---|---|
| **SALES** | **34,004** | **11,036** | **7,195** | **4,877** | **3,437** | **5,787** | **66,336** |
| Fuel and energy purchases | (9,971) | (5,786) | (4,306) | (3,536) | (1,971) | (988) | **(26,558)** |
| Other external expenses | (6,483) | (1,379) | (1,018) | (401) | (419) | (1,531) | **(11,231)** |
| Personnel expenses | (8,174) | (1,121) | (744) | (203) | (273) | (937) | **(11,452)** |
| Taxes other than income taxes | (2,649) | (81) | (15) | (8) | (74) | (90) | **(2,917)** |
| Other operating income and expenses | 2,707 | 393 | 81 | 72 | (14) | 49 | **3,288** |
| **OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION (EBITDA)** | **9,434** | **3,062** | **1,193** | **801** | **686** | **2,290** | **17,466** |
| Net depreciation and amortization | (4,123) | (1,331) | (380) | (458) | (275) | (409) | **(6,976)** |
| Net increases in provisions for renewal of property, plant and equipment operated under concessions | (488) | - | - | - | - | (2) | **(490)** |
| Impairment/Reversals | - | - | (17) | (43) | (5) | (1) | **(66)** |
| Other income and expenses | 320 | (27) | - | - | (119) | (1) | **173** |
| **OPERATING PROFIT (EBIT)** | **5,143** | **1,704** | **796** | **300** | **287** | **1,877** | **10,107** |

| 2008 *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other International | Other activities | Total |
|---|---|---|---|---|---|---|---|
| **SALES** | **34,264** | **8,244** | **7,467** | **5,610** | **3,044** | **5,218** | **63,847** |
| Fuel and energy purchases | (9,362) | (5,567) | (4,682) | (4,167) | (1,856) | (956) | (26,590) |
| Other external expenses | (5,970) | (885) | (1,087) | (451) | (294) | (1,571) | (10,258) |
| Personnel expenses | (7,798) | (657) | (685) | (197) | (254) | (885) | (10,476) |
| Taxes other than income taxes | (2,845) | (92) | (9) | (6) | (134) | (85) | (3,171) |
| Other operating income and expenses | 1,915 | (100) | 110 | 122 | (1) | 37 | 2,083 |
| Prolongation of the TaRTAM system (law of August 4, 2008) | (1,195) | - | - | - | - | - | (1,195) |
| **OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION (EBITDA)** | **9,009** | **943** | **1,114** | **911** | **505** | **1,758** | **14,240** |
| Net depreciation and amortization | (3,923) | (444) | (382) | (453) | (208) | (304) | (5,714) |
| Net increases in provisions for renewal of property, plant and equipment operated under concessions | (519) | - | - | - | - | (7) | (526) |
| Impairment/Reversals | (14) | - | (174) | (42) | 113 | 2 | (115) |
| Other income and expenses | 35 | - | - | - | (11) | 1 | 25 |
| **OPERATING PROFIT (EBIT)** | **4,588** | **499** | **558** | **416** | **399** | **1,450** | **7,910** |

# 9.7.1 France

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 34,004 | 34,264 | (260) | -0.8 | -0.8 |
| EBITDA | 9,434 | 9,009 | 425 | 4.7 | -9.0 (1) |
| EBIT | 5,143 | 4,588 | 555 | 12.1 | - |

*(1) Excluding the effect of the law of August 4, 2008 (prolongation of the TaRTAM transition tariff system).*

## 9.7.1.1 BREAKDOWN OF FINANCIAL INFORMATION FOR THE "FRANCE" SEGMENT

The following breakdown is used in presenting France's contribution to Group sales and EBITDA:

- **"Deregulated activities"** covering Generation, Supply and Optimization in mainland France, and sales of engineering and consulting services;
- **"Regulated activities in mainland France"** (Transmission and Distribution). Transmission and Distribution are regulated *via* the network access tariff TURPE (*Tarifs d'Utilisation des Réseaux Publics d'Électricité*). Sales for the regulated activities include the delivery cost included in integrated tariffs;
- **"Island activities"**, which covers EDF's Generation and Distribution activities in the island energy systems (IES).

## 9.7.1.2 MARKET OPENING

At December 31, 2009, EDF's share of the electricity market for all final customers was 85.2% (85.5% in 2008). Its market share for natural gas was 3.8% in 2009 (3.8% in 2008).

## 9.7.1.3 THE SUPPLY-DEMAND BALANCE

The volume of power produced by nuclear generation in 2009 was 390 TWh, 28 TWh (6.7%) lower than in 2008 (418 TWh). This 28 TWh difference results from:

- industrial action, which caused longer outages of certain units, particularly in the second half-year, and output loss due to reduced power levels; this accounted for some 17 TWh of the decrease over the year as a whole;
- several unscheduled or extended shutdowns, mostly occurring in the second half-year and relating to defects in equipment (steam generators, alternators, transformers) already due for replacement, scheduled in some cases for 2010. These events caused a 6 TWh decrease in nuclear power output;
- shutdown of units at the Blayais plant in France during the first quarter of 2009 after the Klaus cyclone blew vegetation and mud into the Gironde river, and lower power at the Cruas plant when the cooling system became clogged up in November 2009. These environmental events reduced nuclear power output by some 3 TWh;
- the 2008 leap year effect, meaning that 2009 output was automatically one day or approximately 1 TWh lower; and,
- more frequent use of modulation, which reduced nuclear output by some 1 TWh.

Hydropower generation reached 35.1 TWh, 8.0% lower than in 2008 due to the lower hydropower capability, particularly in the second half-year.

Fossil-fired generation produced 16 TWh, +1.2% more than in 2008.

Sales volumes to final customers were down by 7.9 TWh. The fall in demand from large business and industrial customers caused by the economic crisis (-8.3 TWh or -5%) was only partly offset by the rise in volumes due to colder weather in early 2009 (+1.6 TWh) and continued steady growth in demand from residential and service customers.

Due to the lower generation levels, the Group was a net purchaser on wholesale markets, especially in the fourth quarter of 2009. The balance of net sales on the markets (including through VPP (1) auctions) registered a decrease of 23.5 TWh from 2008. With the downward price trends, less use was made of capacity auctions.

## 9.7.1.4 SALES

**France** contributed €34,004 million to Group sales, 0.8% less than for 2008, comprising a positive 0.8 point contribution by natural gas and services, and a negative contribution of 1.6 points by electricity sales.

The variation in electricity sales reflects both price effects (+2.1 points) and volume effects (-3.7 points), caused particularly by the lower net sales on the markets following lower nuclear power output as specified above. The positive price effect principally results from the tariff increases of August 16, 2008 and August 15, 2009, counterbalanced by a negative price effect on capacity auctions.

## 9.7.1.5 EBITDA

**France**'s contribution to Group EBITDA was €9,434 million, an increase of 4.7% compared to 2008 (€9,009 million). Excluding the effect of prolongation of the TaRTAM transition tariff system under the law of August 4, 2008, EBITDA registered organic drop of 9.0% mostly explained by exceptional events: the decline in nuclear power output (-28 TWh or -€1,000 million) and, to a lesser extent, the storms of January (-€160 million).

### FUEL AND ENERGY PURCHASES

Fuel and energy purchases in France amounted to €9,971 million in 2009, up by €609 million (+6.5%) from 2008.

Most of this increase results from the higher cost of energy purchases to compensate for electricity losses from the networks, and the increase in purchases associated with growth in natural gas sales.

1. Virtual Power Plant.

### OTHER EXTERNAL EXPENSES AND PERSONNEL EXPENSES

**Other external expenses** amounted to €6,483 million, 8.6% higher than in 2008. This increase is principally explained by the cost of network repairs after the storms of January 2009, particularly affecting ERDF. Excluding the impact of storm damage, other external expenses increased by 6.3%, as generation plant and network maintenance was stepped up (€200 million) and new operations were developed, particularly in services.

**Personnel expenses** totaled €8,174 million, up by 4.8% from 2008. As workforce numbers remained practically stable, this reflects changing pay levels and greater employee protection as part of the pension reform. Personnel expenses also include additional expenses caused by the storms.

### TAXES OTHER THAN INCOME TAXES

These taxes were down by 6.9% (€196 million), principally as a result of reversal of the FACE provision (+€324 million), corresponding to the contribution due for electrification of rural zones after introduction of the new TURPE 3 network access tariffs.

### OTHER OPERATING INCOME AND EXPENSES

Other operating income and expenses improved by € 792 million. The principal factor is the increase in the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* – CSPE), mostly resulting from changes in the compensation receivable for the additional costs generated by electricity purchase obligations. These additional costs, which are based on the differential between market prices and the effective cost of EDF's purchases from producers covered by the CSPE system, increased with the fall in spot prices in 2009. Another contributing factor was the €1,195 million provision established in 2008 for compensation payable to competitors as a result of prolongation of the TaRTAM transition tariff system from July 1, 2009 to June 30, 2010, an item that had no equivalent in 2009.

## 9.7.1.6 BREAKDOWN OF FINANCIAL INFORMATION FOR THE "FRANCE" SEGMENT BETWEEN DEREGULATED ACTIVITIES, NETWORK ACTIVITIES AND ISLAND ACTIVITIES

The following table shows the variations in sales and EBITDA in France for the deregulated activities, network activities and island activities respectively between 2008 and 2009:

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| **SALES** | **34,004** | **34,264** | **(260)** | **-0.8** | **-0.8** |
| Deregulated activities | 21,811 | 22,081 | (270) | -1.2 | -1.2 |
| Network activities | 12,382 | 12,515 | (133) | -1.1 | -1.1 |
| Island activities | 763 | 701 | 62 | 8.8 | 8.8 |
| Eliminations | (952) | (1,033) | n.s. | n.s. | n.s. |
| **EBITDA** | **9,434** | **9,009** | **425** | **4.7** | **-9.0** |
| Deregulated activities | 5,825 | 4,967 | 858 | 17.3 | -7.5 |
| Network activities | 3,378 | 3,832 | (454) | -11.8 | -12.0 |
| Island activities | 231 | 210 | 21 | 10.0 | 10.0 |

**Sales by the network activities** registered a slight decrease. The rise in the network tariff and the additional income resulting from weather conditions could not make up for falling sales volumes to industrial customers, and the lower income from interconnections.

**Sales by the deregulated activities** also decreased slightly. The lower level of sales to final customers and net sales on the wholesale markets absorbed the impact of the tariff increases of 2008 and 2009.

**EBITDA for network activities** was down by 12%, much more than sales. This decline reflects the rising cost of network losses after compensating purchases and the effect of storm-related costs, particularly for ERDF.

Excluding the effect in 2008 of prolongation of the TaRTAM transition tariff under the law of August 4, 2008, **EBITDA for the deregulated activities** was down by 7.5%. This reflects the lower nuclear generation levels in particular related to the industrial action since April 2009, the structurally higher generation fleet maintenance costs (partly offset by tariff increases), and positive price effects on the cost of purchase obligations net of the CSPE.

**EBITDA for the island activities** was up by 10% due to the negative effects of adjustment of the CSPE in 2008.

## 9.7.2 United Kingdom

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 11,036 | 8,244 | 2,792 | 33.9 | 3.6 |
| EBITDA | 3,062 | 943 | 2,119 | 224.7 | 51.3 |
| EBIT | 1,704 | 499 | 1,205 | 241.5 | 85.6 |

In 2009 the United Kingdom segment includes British Energy's contribution to the consolidated financial statements. EDF Energy now comprises four main divisions, respectively handling network activities, generation and supply activities, British Energy's Existing Nuclear division and development of the Nuclear New Build project in the United Kingdom. The new Energy Sourcing and Customer Supply division is in charge of optimizing EDF Energy's overall exposure to the wholesale markets, and managing sales and marketing. The Existing Nuclear division ensures that the nuclear plants are operated in optimum performance and safety conditions. A Nuclear New Build division has been set up to develop and construct the new EPRs in the UK. The Networks division is unchanged. Finally, the corporate, shared services and support functions of the two original companies have been merged into a single Corporate entity.

British Energy's operational results for 2009 were marked by a significant increase in its nuclear power output (54.5 TWh in 2009 compared to 40 TWh in 2008).

### 9.7.2.1 SALES

**EDF Energy** contributed € 11,036 million to consolidated sales in 2009, an increase of 33.9% reflecting organic growth of 3.6% from 2008.

The effect of the change in scope of consolidation resulting from the acquisition of British Energy was 40.1% (€ 3,308 million), and the fall [1] in the pound sterling against the Euro between 2008 and 2009 generated a negative foreign exchange effect of -9.8% (-€ 810 million).
Organic growth in sales for the United Kingdom segment was driven by fossil-fired generation and supply, which benefited from favorable movements in wholesale market prices (particularly a fall in gas prices) and the July 2008 tariff increases for residential customers. The increases of July 2008 (+17% for electricity and +22% for gas) applied throughout the year 2009. The electricity tariff cut of -8,8% on March 31, 2009 had only a partial influence on organic growth.

Sales in the network activities declined by 2.0% as volumes carried and income from engineering work decreased with the economic slowdown.

### 9.7.2.2 EBITDA

**EDF Energy's** contribution to Group EBITDA stood at € 3,062 million for 2009, considerably higher than in 2008. Excluding the negative 9.9% foreign exchange effect and the € 1,728 million (+183.2%) impact of the first consolidation of British Energy, organic growth in EBITDA for the United Kingdom segment was € 484 million or 51.3%. The Unaudited "pro forma" organic growth in British Energy's business between 2008 and 2009 would be € 949 million.

The impact on organic growth of fair value measurement on forward sale and purchase contracts, which are derivatives not qualifying as hedges under IAS 39, was strongly positive in 2009 (+€ 148 million) although it was markedly negative in 2008 (-€ 287 million). This mainly results from termination in 2009 of hedges initiated in previous years (+€ 142 million). Another more minor factor was the rise in the value of energy contracts at the end of 2009 (unrealised positions: +€ 6 million).

Excluding the impact of IAS 39, organic growth in EBITDA was attributable to the fossil-fired generation and sales, through restored margins on gas supply activities and business with large customers, and optimization of fossil-fired plant output.

EBITDA for the regulated activities was stable, reflecting the achievements in productivity.

### 9.7.2.3 EBIT

**EDF Energy's** contribution to Group EBIT was € 1,704 million, 3.4 times as much as in 2008, as a result of consolidation of British Energy and the organic growth in EBITDA.

1. Average exchange rate in 2009: € 1.124/£1, average exchange rate in 2008: € 1.246/£1.

## 9.7.3 Germany

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 7,195 | 7,467 | (272) | -3.6 | -4.3 |
| EBITDA | 1,193 | 1,114 | 79 | 7.1 | 5.9 |
| EBIT | 796 | 558 | 238 | 42.7 | - |

### 9.7.3.1 SALES

**EnBW's** contribution to 2009 Group sales showed a decrease of 3.6% or organic degrowth of 4.3%. It declined in both the electricity and gas businesses.

This downturn in sales includes the positive €51 million effect of changes in the scope of consolidation, essentially the increased stakes in the Lippendorf and Bexbach plants.

Electricity sales, which were down by 2.7%, were affected by a fall in sales volumes to industrial customers due to the crisis. This was only partly offset by positive price effects, particularly on sales to industrial customers and redistributors. Business on the wholesale markets also registered a decline.

Sales by the natural gas activities were down due to lower sales volumes to all customers segments, particularly redistributors, and unfavorable price effects.

### 9.7.3.2 EBITDA

**EnBW's** contribution to Group EBITDA was up by 7.1% from 2008, corresponding to organic growth of +5.9%.

The improvement in EBITDA for electricity activities reflected better generation margins achieved through the hedging policy begun in previous years in a more favorable price environment. The change in EBITDA was nonetheless affected by the decline in volumes sold to industrial customers.

In the natural gas activities, EBITDA was below its 2008 level as sales dropped due to the economic slowdown.

### 9.7.3.3 EBIT

**EnBW's** contribution to Group EBIT was €796 million, €238 million (42.7%) higher than in 2008.

This increase mainly reflects the higher EBITDA and the effect of impairment recognized in 2008 which had no equivalent in 2009 (€174 million).

## 9.7.4 Italy

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 4,877 | 5,610 | (733) | -13.1 | -12.5 |
| EBITDA | 801 | 911 | (110) | -12.1 | -13.5 |
| EBIT | 300 | 416 | (116) | -27.9 | - |

### 9.7.4.1 SALES

**Italy** [1] contributed €4,877 million to consolidated sales, down by 13.1% corresponding to organic degrowth of 12.5%.

**Edison** registered a €614 million (-12.3%) downturn in sales, particularly in the electricity business.

Sales for the hydrocarbon activity increased due to changes in the scope of consolidation (Abu Qir).

Electricity activities suffered the negative effect of a significant drop in market prices and reduced sales on the exchanges, principally as a result of the economic crisis. These effects were partly offset by development of sales to final customers and wholesalers (+24.6%).

The hydrocarbon activities were affected by an unfavourable price effect associated with the fall in Brent and gas prices. This was counterbalanced by the rise in volumes sold to residential customers due to colder weather in the first quarter of 2009, and successful sales campaigns that led to a 12.4% increase in sales to final customers.

Sales by **Fenice** were down by €119 million (-19.6%), due to the lower levels of business for its main customers, particularly in the automobile industry. The organic change was -16.1%.

1. Edison Group and Fenice.

### 9.7.4.2 EBITDA

The **Italy** segment contributed €801 million to the Group's consolidated EBITDA, down by 12.1% from 2008, or 13.5% based on constant scope and exchange rates.

**Edison** contributed €713 million in 2009 against €807 million in 2008, a decrease of €94 million or -11.6% (13.6% organic degrowth) despite tight control of operating costs.

EBITDA for the electricity activities suffered the effect of shrinking volumes and production margins in unfavorable market conditions. It also reflects the progressive expiry of "CIP6" plant subsidies.

The hydrocarbon activities' contribution was relatively stable. Sales to final customers benefited from volume effects and lower sourcing prices, while the exploration and generation activity was negatively affected by lower hydrocarbon prices.

**Fenice's** contribution to consolidated EBITDA amounted to €89 million for 2009, down by €17 million from 2008, in line with the general economic slowdown.

### 9.7.4.3 EBIT

**Italy's** contribution to consolidated EBIT stood at €300 million, down by €116 million in keeping with the decline in EBITDA.

## 9.7.5 Other International

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 3,437 | 3,044 | 393 | 12.9 | 10.6 |
| EBITDA | 686 | 505 | 181 | 35.8 | 22.6 |
| EBIT | 287 | 399 | (112) | (28.1) | - |

The Other International segment principally covers other operations in Europe (Benelux including SPE, owned 51% by EDF, and central European countries), Asia (China, Vietnam and Laos), the Norte Fluminense fossil-fired plant in Brazil and nuclear activities in the United States, particularly the business of Constellation Energy Nuclear Group (CENG) (owned 49.99% by EDF).

### 9.7.5.1 SALES

The Other international segment contributed €3,437 million to Group sales, up by €393 million from 2008, with organic growth of 10.6%.
This organic sales growth is mainly located in Poland, Belgium and Brazil.

In **Central Europe**, sales registered organic growth of €197 million. The foreign exchange effect was strongly negative in Poland and Hungary. The +19.1% organic growth in **Poland** mostly resulted from the higher sale price for electricity sold to distributors under annual contracts, and an increase in sales of green certificates due to greater use of biomass.

Business in other **continental European** countries (Belgium, Austria, the Netherlands) includes the activities of SPE from November 26, 2009. Excluding the effect of the change in the scope of consolidation, organic growth in this zone was +33.3%, essentially driven by an increase in volumes of electricity and gas sales, and higher prices on the wholesale market in Belgium.

The +8.2% organic sales growth in **Asia** benefited from good performances by Figlec (China) and Meco (Vietnam), and the favourable effect of rising coal prices for Figlec's tariffs, with no impact on EBITDA.

In **Brazil**, organic sales growth amounted to +16.9%.

### 9.7.5.2 EBITDA

EBITDA for the Other international segment, excluding the effects of changes in the scope of consolidation and exchange rates, saw organic growth of 22.6%.

In the **central European countries**, EBITDA rose by €48 million (+14.2%) despite the unfavorable impact of foreign exchange rates. Excluding foreign exchange effects, growth stands at +26%.

**Poland** achieved 81.9% organic growth in EBITDA thanks to the higher electricity prices in the annual contracts signed with distributors, and the lower level of costs caused by a reduction in $CO_2$ emissions (lower volumes and more extensive use of biomass).

In **Hungary**, EBITDA showed an organic decline of 24.0%, reflecting Demasz's poorer performance in a context marked by the economic slowdown and lower electricity prices, and the unfavorable impact of the Hungarian currency's fall against the Euro.

EBITDA in other **continental European countries** Belgium rose by €82 million. This increase results from consolidation of SPE and commissioning of the SLOE CCG plant in the Netherlands.

In **Asia**, EBITDA was up by 0.7%.

**Brazil** registered organic growth of +35.0% thanks to positive price effects on both sales and purchase optimisation, exports to Uruguay and savings on maintenance.

### 9.7.5.3 EBIT

EBIT was down by 28.1% from 2008.

This essentially reflects the change in EBITDA, the higher depreciation and amortization charges following the acquisitions of CENG and SPE, and reversals from impairment in 2008 that had no equivalent in 2009.

## 9.7.6 Other activities

| *(in millions of Euros)* | 2009 | 2008 | Variation | Variation *(%)* | Organic growth *(%)* |
|---|---|---|---|---|---|
| Sales | 5,787 | 5,218 | 569 | 10.9 | 9.9 |
| EBITDA | 2,290 | 1,758 | 532 | 30.3 | 25.1 |
| EBIT | 1,877 | 1,450 | 427 | 29.4 | - |

Other activities comprise, among other entities, EDF Énergies Nouvelles, EDF Trading, Électricité de Strasbourg and the investment in Dalkia.

### 9.7.6.1 SALES

The contribution by the **Other activities** segment to Group sales was €5,787 million, up by €569 million with organic growth of 9.9% since 2008. It includes adjustments related to hedging instruments (impact of +€275 million in 2009).

Sales at **EDF Énergies Nouvelles** amounted to €1,086 million, an increase of €128 million (+13.4%). The rise was driven by newly-commissioned wind and solar energy generation plants in Europe and the United States, and growth in distributed energies business.

**EDF Trading's** [1] sales were €70 million (-5.8%) lower than in 2008. Excluding the effects of changes in the scope of consolidation following acquisition of EDF Trading North America (formerly Eagle Energy Partners), it decreased by 7.7%. This good performance was achieved against lower volatility in commodity prices in 2009.

**Dalkia's** contribution to sales decreased by €97 million (-4.2%), mostly as a result of unfavorable foreign exchange effects. Organic growth from 2008 was 2.0%, essentially driven by business in central Europe.

### 9.7.6.2 EBITDA

**Other activities** contributed €2,290 million to Group EBITDA, €532 million more than in 2008 with organic growth of 25.1%.

The organic growth in this segment's EBITDA was principally located at **EDF Énergies Nouvelles**, which registered an increase of +€147 million (+75.4%) boosted by development of its generation business.

**EDF Trading** contributed €907 million to Group EBITDA, a €116 million (-11.3%) decrease from 2008 reflecting the change in margins.

**Dalkia**'s EBITDA saw organic growth of 27.8%, benefiting from the rise in sales, especially in central Europe.

### 9.7.6.3 EBIT

EBIT for Other activities increased by €427 million from 2008.

This rise reflects the increase in EBITDA, which was partly offset by higher net depreciation and amortization.

1. EDF Trading sales consist of trading margins.

# 9.8 Cash flow and net indebtedness

## 9.8.1 Cash flow

The table below summarizes the cash flows generated by the Group over the years 2008 and 2009:

| *(in millions of Euros)* | **2009 (2)** | 2008 (1) | Variation | Variation *(%)* |
|---|---|---|---|---|
| **Net cash flow from operating activities** | **12,374** | **7,572** | **4,802** | **63.4** |
| **Net cash flow used in investing activities** | **(24,944)** | **(16,665)** | **(8,279)** | **49.7** |
| **Net cash flow from financing activities** | **13,910** | **8,811** | **5,099** | **57.9** |
| **Net increase/(decrease) in cash and cash equivalents** | **1,340** | **(282)** | **1,622** | **-575.2** |
| Cash and cash equivalents – opening balance | 5,869 | 6,035 | (166) | -2.8 |
| Effect of currency fluctuations | (237) | (79) | (158) | 200.0 |
| Financial income on cash and cash equivalents | 45 | 188 | (143) | -76.1 |
| Effect of other reclassifications | (35) | 7 | (42) | -600.0 |
| **CASH AND CASH EQUIVALENTS – CLOSING BALANCE** | **6,982** | **5,869** | **1,113** | **19.0** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Figures for 2009 include the effects of first consolidation of British Energy from January 5, 2009, Constellation Energy Nuclear Group from November 6, 2009 and SPE from November 26, 2009.*

### 9.8.1.1 NET CASH FLOW FROM OPERATING ACTIVITIES

| *(in millions of Euros)* | **2009** | 2008 | Variation | Variation *(%)* |
|---|---|---|---|---|
| **Income before tax from consolidated companies** | **5,582** | **4,860** | **722** | **14.9** |
| (Impairment)/Reversals | 66 | 115 | (49) | -42.6 |
| Accumulated depreciation and amortization, provisions and changes in fair value | 7,805 | 4,674 | 3,131 | 67.0 |
| Financial income and expenses | 1,477 | 1,057 | 420 | 39.7 |
| Dividends received from companies accounted for under the equity method | 143 | 110 | 33 | 30.0 |
| Capital gains/losses | (569) | (245) | (324) | 132.2 |
| Change in working capital | (983) | (211) | (772) | 365.9 |
| **Net cash flow from operations** | **13,521** | **10,360** | **3,161** | **30.5** |
| Net financial expenses disbursed | (1,408) | (1,068) | (340) | 31.8 |
| Income taxes paid | (963) | (1,720) | 757 | -44.0 |
| Cancellation of the European Commission decision | 1,224 | - | 1,224 | n.s. |
| **NET CASH FLOW FROM OPERATING ACTIVITIES** | **12,374** | **7,572** | **4,802** | **63.4** |

The net cash flow from operating activities amounted to €12,374 million in 2009, an increase of €4,802 million from 2008, mainly due to:

(i) the €3,161 million rise in net cash flow from operations, essentially relating to the change in the income before taxes from consolidated companies after adjustment for impairment (reversals), depreciation and amortization and changes in fair value, which amounted to €13,453 million in 2009 compared to €9,649 million in 2008, a €3,804 million increase.

The change in financial income and expenses reflects the increase in average gross indebtedness, and to a lesser extent discount expenses (see section 9.6.4 "Financial result"), and the higher level of capital gains on sales results principally from the gain on EDF's transfer to Alpiq of its drawing rights on the Emosson hydropower plant in exchange for shares in Alpiq (see section 9.2.2.1.2.3).

The change in working capital was an increase of €983 million. After adjustment for the effects of the full and final -€605 million payment made in 2009 under the 2008 EDF/AREVA agreement for decommissioning of La Hague, working capital increased by €378 million.

This rise is attributable to increases of €1,207 million and €985 million respectively in working capital for the France and "Other activities" segments, while internationally (United Kingdom, Germany, Italy, Other International) working capital decreased by €1,814 million.

In **France**, the increase was mainly explained by the €1,079 million increase in the CSPE receivable and the €462 million rise in inventories (essentially nuclear fuel), partly offset by the €538 million decrease in trade receivables net of advances received, which largely resulted from the growing numbers of customers opting for monthly payments.

**Outside France**, working capital decreased by €1,814 million, chiefly due to the lower level of trade receivables in the United Kingdom, Germany and Italy as a result of the economic slowdown.

In the **Other activities** segment, the increase in working capital of €985 million is mainly explained by EDF Trading's transactions in $CO_2$ emission permits and an increase in inventories (€487 million), largely at EDF Énergies Nouvelles (€307 million) where stocks of turbines and work-in-process grew as business expanded;

(ii) the €757 million decrease in income taxes paid, resulting mainly from a reimbursement received by EDF SA for excess advance installments paid for 2008;

(iii) in 2009, the net cash flow from operating activities includes the non-recurring tax reimbursement from the French State following cancellation of the European Commission's decision of December 16, 2003 (€1,224 million) (see section 20.5.1 ("Legal proceedings concerning EDF")).

Operating cash flow totaled €12,133 million in 2009, 20.3% higher than for 2008 (€10,083 million). Details are shown below:

| *(in millions of Euros)* | **2009** | 2008 | Variation | Variation *(%)* |
|---|---|---|---|---|
| **Net cash flow from operations** | **13,521** | **10,360** | **3,161** | **30.5** |
| Net financial expenses disbursed | **(1,408)** | (1,068) | (340) | 31.8 |
| Income taxes paid | **(963)** | (1,720) | 757 | -44.0 |
| Change in working capital [(1)] | **983** | 2,511 | (1,528) | -60.9 |
| **OPERATING CASH FLOW (FFO)** | **12,133** | **10,083** | **2,050** | **20.3** |

*(1) After reclassification in 2008 of the effects of the AREVA-EDF contract, which has no net impact on net cash flow from operations.*

### 9.8.1.2 NET CASH FLOW USED IN INVESTING ACTIVITIES

Net cash outflows for investing activities amounted to €24,944 million in 2009, compared to €16,665 million in 2008.

The following table sets forth the breakdown of net cash flow used in investing activities between purchases and disposals of property, plant and equipment and intangible assets, acquisition and disposals of companies net of cash acquired/transferred, and the change in financial assets:

| *(in millions of Euros)* | **2009** | 2008 | Variation | Variation *(%)* |
|---|---|---|---|---|
| **Purchases of property, plant and equipment and intangible assets** | **(12,370)** | **(9,703)** | **(2,667)** | **27.5** |
| Disposals of property, plant and equipment and intangible assets | **252** | 214 | 38 | 17.8 |
| **Net Capex [(1)]** | **(12,118)** | **(9,489)** | **(2,629)** | **27.7** |
| Acquisitions / disposals of companies, net of cash acquired / transferred | **(13,160)** | (281) | (12,879) | n.s. |
| Changes in financial assets | **334** | (6,895) | 7,229 | -104.8 |
| **NET CASH FLOW USED IN INVESTING ACTIVITIES** | **(24,944)** | **(16,665)** | **(8,279)** | **49.7** |

*(1) In managing its industrial investments, the Group uses the net Capex indicator ("Purchases of property, plant and equipment and intangible assets" net of "Disposals of property, plant and equipment and intangible assets") in order to monitor changes in its investments in tangible and intangible assets.*

## PURCHASES OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS (GROSS CAPEX)

### An increase of over 27% from 2008

Operating investments (gross capital expenditure) for 2009 amounted to €12,370 million, €2,667 million or 27.5% higher than for 2008. Changes over the period in the Group's gross capital expenditure were as follows:

| *(in millions of Euros)* | **2009** | 2008 | Variation | Variation *(%)* |
|---|---|---|---|---|
| Network activities | 3,377 | 2,580 | 797 | 30.9 |
| Deregulated activities | 3,312 | 2,299 | 1,013 | 44.1 |
| Island activities | 473 | 293 | 180 | 61.4 |
| **Total France** | **7,162** | **5,172** | **1,990** | **38.5** |
| United Kingdom | 2,193 | 1,462 | 731 | 50.0 |
| Germany | 593 | 572 | 21 | 3.7 |
| Italy | 483 | 474 | 9 | 1.9 |
| Other International | 381 | 480 | (99) | (20.6) |
| **Total international** | **3,650** | **2,988** | **662** | **22.2** |
| **Other activities** | **1,558** | **1,543** | **15** | **1.0** |
| **OPERATING INVESTMENTS (GROSS CAPEX)** | **12,370** | **9,703** | **2,667** | **27.5** |

Capital expenditure increased across all geographic areas except in the "Other International" segment, but was mostly located in France and the United Kingdom.

The increase in capital expenditure in **France** was €1,990 million (38.5%). It concerned the deregulated activities (+€1,013 million), the network activities (+€797 million) and the island activities (+€180 million).

In the deregulated activities, most of the increase concerned investments in generation, up from €2,150 million in 2008 to €3,082 million in 2009. This comprises expenditure on construction of the Flamanville EPR, development of fossil-fired generation capacities (repowering at Martigues, the CCG project at Blénod and combustion turbines at Vaires and Montereau), and maintenance programs for fossil-fired, hydropower and nuclear facilities, which have seen significant increases since 2008.

Investments in the network activities rose by €797 million (+30.9%) from 2008. They principally concerned the distribution networks and focused on connection quality and work for safety and the environment, partly in connection with preventive measures against climate risks.

Capital expenditure for the Island Energy Systems also rose with the ongoing expansion of new generation facilities (essentially on La Réunion, Guadeloupe and Martinique).

In the **United Kingdom**, gross capital expenditure amounted to €2,193 million for 2009, up by 50.0% from 2008. This increase mainly reflects the consolidation of British Energy (€338 million), but also the initial outlays for the UK's Nuclear New Build program and other investments for construction of the new West Burton fossil-fired plant.

In **Germany**, capital expenditure for 2009 totaled €593 million (EDF's share), up by 4.0% from 2008. It chiefly concerned the ongoing construction of the supercritical coal-fired plant at Karlsruhe and investments in offshore windfarms and hydropower.

In **Italy**, capital expenditure for 2009 totaled €483 million (EDF's share), up by 2% from 2008. The increase mostly concerns Edison and resulted from development in renewable energies and electricity generation in Greece.

In the **Other International** segment, capital expenditure stood at €381 million, lower than in 2008. The decline was mostly concentrated in the central European countries, after the foreign exchange effects and specific investments of 2008.

Capital expenditure in the **Other activities** rose slightly (+1%). The higher level of investment at EDF Énergies Nouvelles, which invested €1,267 million in 2009, primarily relates to ongoing development of windfarms and solar and photovoltaic facilities. This rise was countered by a decline in investments for the gas activities (following purchases of North Sea gas fields in 2008).

### ACQUISITIONS/DISPOSALS OF COMPANIES, NET OF CASH ACQUIRED

This heading comprises acquisitions and disposals of shares in consolidated companies, net of the related cash. In 2008, it essentially comprised the sale of CIP6 plants, Dolomiti Edison Energy and Hydros by Edison in Italy, and acquisitions of EDF Trading North America by EDF Trading and developments at Dalkia.

In 2009, the main transactions were:

- the British Energy purchase offer and subsequent squeeze-out offer, which resulted in a £10,132 million payment (€10,827 million). At January 5, 2009, British Energy's cash and cash equivalents amounted to £1,224 million (€1,308 million);
- acquisition of 49.99% of Constellation Energy Nuclear Group (CENG), followed by an additional contribution of $3,502 million (€2,508 million) made on November 6, 2009;
- the other major operations of 2009 were the acquisitions by EnBW of a 26% interest in EWE, Lippendorf and Bexbach for approximately €1.4 billion, acquisition of 51% of SPE for €1,328 million and sale of a 20% share of Lake Acquisitions/British Energy to Centrica for £2,215 million (€2,470 million).

### CHANGES IN FINANCIAL ASSETS

The variation in financial assets between 2008 and 2009 amounted to €7,229 million. This change is primarily explained by the development of international nuclear activities, principally in the United Kingdom with the first phase of the acquisition of British Energy for €2,679 million, and in the United States with the acquisition of shares in Constellation Energy Group for €412 million and payment in 2008 of €854 million in connection with the planned acquisition of 49.99% of its nuclear assets. Most of the balance corresponds to ordinary cash management operations.

### 9.8.1.3 NET CASH FLOW FROM FINANCING ACTIVITIES

| *(in millions of Euros)* | **2009 (2)** | 2008 (1) | Variation | Variation *(%)* |
|---|---|---|---|---|
| Issuance of borrowings | **30,228** | 15,717 | 14,511 | 92.3 |
| Repayment of borrowings | **(15,486)** | (4,882) | (10,604) | 217.2 |
| Dividends paid by EDF | **(1,228)** | (2,438) | 1,210 | -49.6 |
| Dividends paid to minority interests | **(83)** | (90) | 7 | -7.8 |
| Capital increase subscribed by minority interests | **-** | 249 | (249) | -100.0 |
| Increase in special concession liabilities | **253** | 285 | (32) | -11.2 |
| Investment subsidies | **214** | 150 | 64 | 42.7 |
| Treasury shares | **12** | (180) | 192 | -106.7 |
| **NET CASH FLOW USED IN FINANCING ACTIVITIES** | **13,910** | **8,811** | **5,099** | **57.9** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Figures for 2009 include the effects of first consolidation of British Energy from January 5, 2009, Constellation Energy Nuclear Group from November 6, 2009 and SPE from November 26, 2009.*

In 2009, the cash flows related to financing activities generated a net inflow of €13,910 million, a difference of €5,099 million from 2008. This change is mainly due to:

- the bond issues of 2009 totaling €14,511 million (see section 9.2.2.6, "Financing Group" for details);
- higher bond repayments totalling €10,604 million (drawings on the syndicated loan used to finance acquisition of British Energy were fully repaid during the year);
- dividends paid by EDF: €1,228 million in 2009 compared to €2,438 million in 2008 (the interim dividend for 2009 was paid €938 million in the form of shares and €64 million in cash).

## 9.8.2 Net indebtedness

Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

Changes in the Group's net indebtedness were as follows:

| *(in millions of Euros)* | **2009 (2)** | 2008 (1) | Variation | Variation *(%)* |
|---|---|---|---|---|
| **Operating profit before depreciation and amortization (EBITDA)** | **17,466** | **14,240** | **3,226** | **23** |
| Cancellation of non-cash items included in EBITDA (3) | (3,105) | (1,399) | (1,706) | |
| Net financial expenses disbursed | (1,408) | (1,068) | (340) | |
| Income taxes paid | (963) | (1,720) | 757 | |
| Other items (4) | 143 | 30 | 113 | |
| **Operating cash flow** | **12,133** | **10,083** | **2,050** | **20** |
| Change in working capital (3) | (378) | (2,511) | 2,133 | |
| Net operating investments (gross CAPEX less disposals) | (12,118) | (9,489) | (2,629) | |
| Non-recurring items (5) | 1,224 | – | 1,224 | |
| **Free cash flow** | **861** | **(1,917)** | **2,778** | **n.s.** |
| Dedicated assets | (1,902) | (1,785) | (117) | |
| Net financial investments | (14,336) | (4,305) | (10,031) | |
| Dividends paid (6) | (1,311) | (2,528) | 1,217 | |
| Other changes (7) | (699) | 479 | (1,178) | |
| **(Increase)/Decrease in net indebtedness, excluding the impact of changes in scope of consolidation and exchange rates** | **(17,387)** | **(10,056)** | **(7,331)** | **73** |
| Effect of change in scope of consolidation | 453 | 138 | 315 | |
| Effect of change in exchange rates | (760) | 1,473 | (2,233) | |
| Effect of other non-monetary changes (8) | (326) | 238 | (564) | |
| **(Increase)/Decrease in net indebtedness** | **(18,020)** | **(8,207)** | **(9,813)** | **120** |
| **NET INDEBTEDNESS AT BEGINNING OF PERIOD** | **24,476** | **16,269** | **8,207** | **50** |
| **NET INDEBTEDNESS AT END OF PERIOD** | **42,496** | **24,476** | **18,020** | **74** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" (see notes 1 and 2 to the consolidated financial statements) and changes in presentation for Edison trading revenues.*

*(2) Figures for 2009 include the effects of first consolidation of British Energy from January 5, 2009, Constellation Energy Nuclear Group from November 6, 2009 and SPE from November 26, 2009.*

*(3) 2008: After reclassification of effects of the agreement between AREVA and EDF.*

*(4) Mainly corresponds to dividends received from companies accounted for under the equity method.*

*(5) Payment from the French State after cancellation of the European Commission's decision of December 16, 2003.*

*(6) Dividends paid in cash, not including the interim dividend for 2009 (€938 million) paid in the form of shares.*

*(7) 2009: mainly corresponds to the payment for decommissioning of La Hague under the 2008 EDF-AREVA agreement (€605 million), 2008: includes minority interests' shares in the capital increase at EDF Energies Nouvelles.*

*(8) Mainly corresponds to changes in fair value and accounting reclassifications affecting components of net indebtedness.*

The Group's net indebtedness stood at €42,496 million at December 31, 2009, compared to €24,476 million at December 31, 2008. The increase over the year thus totaled €18,020 million.

The Group generated free cash flow of €861 million. This includes capital expenditure net of disposals of €12,118 million, financed by the cash flow from operations (€12,133 million) and the –€378 million change in working capital. It also includes the exceptional tax reimbursement by the French State following cancellation of the European Commission's decision of December 16, 2003 (€1,224 million).

Allocations to dedicated assets, amounting to €1,902 million, reflect the resumption of allocations since July 1, 2009 (see section 9.9.1.6 ("Management of financial risk on EDF's dedicated asset portfolio")).

The change in net financial indebtedness also includes the first installment in 2009 of the full and final payment for decommissioning of La Hague following the 2008 EDF/AREVA agreement (€605 million).

This change also reflects completion of major external growth operations, which made a strong contribution to cash flow from operations (approximately €1.2 billion) and were financed by debt.

Other net financial investments amounted to €14,336 million, and essentially comprise €14,752 million of acquisitions net of disposals as follows:

- €17,417 million for external growth, essentially for development of international nuclear operations, mainly with acquisition of the residual capital of British Energy in the UK (€10,827 million, before the sale to Centrica of 20% of British energy for €2,470 million), and with completion of the acquisition of 49.99% of Constellation Energy Nuclear Group in the US (€2,508 million). They also include acquisition of 51% of SPE in Belgium (€1,328 million), 26% of EWE by EnBW and Edisons's investment in the Abu Qir gas fields;
- €2,665 million of sales of assets, chiefly the 20% share in British Energy transferred to Centrica for €2,470 million.

Dividends paid in cash (€1,311 million) comprise the balance of the 2008 dividends (€1,164 million), the portion of the interim dividend distributed in late 2009, paid in cash (€64 million) and dividends paid by Group subsidiaries to their minority shareholders (€83 million). Total dividends paid out in 2008 amounted to €2,528 million.

Foreign exchange effects (particularly the pound sterling's rise against the Euro[1]) and changes in the scope of consolidation (primarily consolidation of British Energy's cash and cash equivalents) accounted for €307 million of the increase in the Group's net financial indebtedness.

# 9.9 Management and control of market risks

## 9.9.1 Management and control of financial risks

This chapter sets forth the Group's policies and principles for management of financial risks (liquidity, interest rate, foreign exchange rate, equity and counterparty risks), defined in the Financial Management Framework and the group counterparty risk management policy introduced by the EDF group. These principles apply only to EDF and operationally controlled subsidiaries (*i.e.* entities other than Edison, EnBW, Dalkia and CENG) or subsidiaries that do not benefit by law from specific guarantees of independent management (RTE-EDF Transport and EDF Réseau Distribution France-ERDF). In compliance with IFRS 7, the following paragraphs include information on the nature of risks resulting from financial instruments, based on analysis of sensitivities and credit (counterparty) risks.

In view of the Group's international development, a dedicated body was set up in 2002 – the Financial Risks Control Division (*Département Contrôle des Risques Financiers* – DCRF) – to control financial risks at Group level by ensuring correct application of the principles of the Financial Management Framework. This body also has the task of carrying out a second-level check (methodology and organization) of EDF and operationally controlled group subsidiaries, and an operational verification of financing activities at parent company level.

The DCRF issues daily monitoring reports of risk indicators relevant to activities in EDF's trading room.

Regular internal audits are carried out to ensure controls are effectively applied.

### 9.9.1.1 LIQUIDITY POSITION AND MANAGEMENT OF LIQUIDITY RISKS

#### LIQUIDITY POSITION

At December 31, 2009, the Group's liquidities totaled €11,717 million and available credit lines amounted to €10,039 million. The Group also has access to financial resources through short-term issues and bond issue programs.

In 2010, the Group's scheduled debt repayments (principal and interest) are forecast at €11,479 million, including €3,954 million for bonds.

At December 31, 2009, no Group company was in default on any borrowing.

#### MANAGEMENT OF LIQUIDITY RISKS

As part of its policy to manage liquidity, finance its operating investment and external growth program and reinforce long-term debt, the Group undertook bond issues during 2009 (for details see note 6 to the consolidated financial statements at December 31, 2009 "Other major events and transactions"). These bonds were issued by EDF SA in respective amounts of €9,950 million (including €3,269 million subscribed by retail investors), $5,000 million, £1,500 million, CHF 650 million and JPY 120,400 million. EDF Energy, EnBW and Edison also issued bonds in 2009 in the amounts of £950 million, €1,350 million and €700 million respectively.

The average maturity of consolidated debt was thus increased 7.4 years at December 31, 2009, compared to 5.3 years at December 31, 2008, and EDF SA debt now has average maturity of 8.5 years compared to 5.5 years at December 31, 2008.

At December 31, 2009, the residual maturities of financial liabilities (including interest payments), are as follows under IAS 39 (values based on exchange and interest rates at December 31, 2009):

| *(in millions of Euros)* | Long-term debt | Short-term debt | Hedging instruments * | | Guarantees given on borrowings |
|---|---|---|---|---|---|
| | | | Interest rate swaps | Currency swaps | |
| 2010 | 7,052 | 4,427 | (29) | 160 | 23 |
| 2011-2013 | 15,794 | - | (72) | (87) | 36 |
| 2014 and later | 47,743 | - | (119) | 151 | 264 |
| **TOTAL** | **70,589** | **4,427** | **(220)** | **224** | **323** |

** Data on hedging instruments include both assets and liabilities.*

1. The pound sterling rose by 7.3% against the Euro: December 31, 2008: €1.0498/£1; December 31, 2009: €1.1260/£1.

In an environment marked by major liquidity tensions on the financial markets, the EDF group was able to meet its financing needs by conservative liquidity management, and obtained financing on satisfactory terms.

Four specific levers are used to manage the Group's liquidity risk:

- the Group's cash pooling system, which centralizes cash management for controlled subsidiaries with the exception of RTE-EDF Transport. The subsidiaries' cash balances are made available to EDF SA in return for interest, so as to optimize the Group's cash management and provide subsidiaries with a system that guarantees them market-equivalent financial terms;
- centralization of financing for controlled subsidiaries at the level of the Group's cash management department. EDF Energy and EDF Trading now have credit lines with EDF. The investment subsidiary EDF Investissements Groupe set up in partnership with the bank Natixis Belgique Investissements provides medium and long-term financing for EDF group subsidiaries;
- active management and diversification of financing sources used by the Group: the Group has access to short-term resources on various markets through programs for French commercial paper (*billets de trésorerie*), US commercial paper and Euro market commercial paper. For EDF, the ceilings for these programs are €6 billion for its French commercial paper, $10 billion for its US commercial paper and €1.5 billion for its Euro market commercial paper. EnBW, RTE-EDF Transport and EDF Energy also have short-term programs for maximum amounts of €2 billion, €1 billion and £1 billion respectively;
- EDF also has regular access to the bond market through an annually updated EMTN (Euro Medium Term Note) program, registered with the market authorities in France and "passported" to other EU countries. The current ceiling for this program is €16 billion. EnBW, EDF Energy, RTE-EDF Transport and Edison also have their own EMTN programs, with ceilings of €7 billion, £4 billion, €6 and €2 billion respectively.

The table below sets forth the Group's borrowings of more than €750 million or the equivalent value in other currencies by maturity at December 31, 2009:

| Type of borrowing | Entity | Issue date | Maturity | Nominal amount *(millions of currency units)* | Currency | Rate *(%)* |
|---|---|---|---|---|---|---|
| Euro MTN | EDF | 07/2000 | 10/2010 | 1,000 | EUR | 5.8 |
| Bond | Edison | 02/2007 | 12/2011 | 900 | EUR | Euribor 1M |
| Euro MTN | EnBW | 02/2002 | 02/2012 | 1,000 | EUR | 5.9 |
| Bond | TDE | 09/2005 | 09/2012 | 1,200 | EUR | Euribor 3M |
| Euro MTN | EDF | 11/2008 | 01/2013 | 2,000 | EUR | 5.6 |
| Euro MTN | EnBW | 11/2008 | 11/2013 | 750 | EUR | 6.0 |
| Bond | EDF | 01/2009 | 01/2014 | 1,250 | USD | 5.5 |
| Euro MTN | EDF | 07/2009 | 07/2014 | 3,269 | EUR | 4.5 |
| Euro MTN | EDF | 01/2009 | 01/2015 | 2,000 | EUR | 5.1 |
| Bond | RTE | 06/2008 | 05/2015 | 1,250 | EUR | 4.9 |
| Euro MTN | EnBW | 07/2009 | 07/2015 | 750 | EUR | 4.1 |
| Bond | RTE | 09/2006 | 09/2016 | 1,000 | EUR | 4.1 |
| Euro MTN | EDF | 10/2001 | 10/2016 | 1,100 | EUR | 5.5 |
| Euro MTN | EDF | 02/2008 | 02/2018 | 1,500 | EUR | 5.0 |
| Bond | RTE | 08/2008 | 08/2018 | 1,000 | EUR | 5.1 |
| Euro MTN | EnBW | 11/2008 | 11/2018 | 750 | EUR | 6.9 |
| Bond | EDF | 01/2009 | 01/2019 | 2,000 | USD | 6.5 |
| Euro MTN | EDF | 05/2008 | 05/2020 | 1,200 | EUR | 5.4 |
| Euro MTN | EDF | 01/2009 | 01/2021 | 2,000 | EUR | 6.3 |
| Euro MTN | EDF | 09/2009 | 09/2024 | 2,500 | EUR | 4.6 |
| Euro MTN | EDF | 02/2003 | 02/2033 | 850 | EUR | 5.6 |
| Euro MTN | EDF | 05/2009 | 06/2034 | 1,500 | GBP | 6.1 |
| Bond | EDF | 01/2009 | 01/2039 | 1,750 | USD | 7.0 |

The entities with syndicated loan facilities at December 31, 2009 are EDF, EnBW, Edison and RTE-EDF Transport:

- EDF has a syndicated loan facility for €6 billion, valid until March 2012. This amount comprises a €2 billion swingline available for same-day drawing. This facility is not conditional on ratios or a given credit rating, and no drawings had been made on this facility at December 31, 2009;
- EnBW's syndicated loan facility, valid until May 2012, comprises two tranches: one (*tranche A*) of €1 billion with a one-year term, with an option for renewal and drawing facility upon expiry at the lender's initiative, and another (*tranche B*) of €58 million valid until October 2010 and €1,442 million valid until May 2012. No drawings had been made on this credit facility at December 31, 2009;
- Edison's syndicated loan for €1.5 billion is valid until April 2013. One €150 million drawing was made on it in December 2008 for a one-month period;
- RTE-EDF Transport's syndicated loan consists of one tranche of €1 billion valid until May 2013, comprising a €300 million swingline. No drawings had been made on this credit facility at December 31, 2009.

EDF's syndicated loan of £11 billion contracted on October 2, 2008 with a view to financing the acquisition of British Energy was fully repaid during 2009, primarily using the proceeds of EDF's various bond issues in 2009. This loan was terminated in September 2009.

As part of its overall liquidity management, EDF undertook a $2,250 million bond issue on January 26, 2010 comprising one 10-year tranche and one 30-year tranche. EDF also reinforced its bank credit lines in January 2010.

### 9.9.1.2 CREDIT RATINGS

The financial ratings agencies Standard & Poor's, Moody's and Fitch Ratings attributed the following long-term and short-term ratings to EDF group entities at December 31, 2009:

| Company | Agency | Long-term rating | Short-term rating |
|---|---|---|---|
| EDF | Standard & Poor's | A+, stable outlook (1) | A-1 |
| | Moody's | Aa3, stable outlook | P-1 |
| | Fitch Ratings | A+, stable outlook | F1 |
| RTE-EDF Transport | Standard & Poor's | A+, stable outlook (2) | A-1 |
| EDF Trading | Moody's | A3, stable outlook | n.a. |
| EDF Energy | Standard & Poor's | A, on creditwatch (3) | A-1 |
| | Moody's | A3, on the watchlist (3) | P-2 |
| | Fitch Ratings | A-, stable outlook | F2 |
| Edison SpA | Standard & Poor's | BBB+, negative outlook (4) | A-2 |
| | Moody's | Baa2, negative outlook (4) | n.a. |
| | Fitch Ratings | BBB+, negative outlook (4) | F2 |
| EnBW | Standard & Poor's | A-, negative outlook (5) | A-2 |
| | Moody's | A2, stable outlook | P-1 |
| | Fitch Ratings (6) | A, stable outlook | F1 |

*(1) Upgraded from negative to stable outlook on June 30, 2009 following methodological revision of rating for companies linked to the State.*

*(2) Downgraded from AA, stable outlook /A-1+ to A+, stable outlook /A-1 on November 10, 2009 following the impact of the new delivery tariff on RTE-EDF Transport's financial position.*

*(3) On S&P creditwatch since October 2, 2009 and on Moody's watchlist since October 6, 2009 after the announcement that EDF Energy's distribution networks might be sold in the United Kingdom.*

*(4) Downgraded from stable to negative outlook on July 7, 2009 by Moody's, September 29, 2009 by S&P and December 18, 2009 by Fitch Ratings, following the announcement of acquisition of the Abu Qir gasfields and installation of the new Rovigo gas terminal.*

*(5) Downgraded from stable to negative outlook on December 18, 2009 due to uncertainty over EnBW's external growth program.*

*(6) Rated by Fitch Ratings since May 2009.*

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### 9.9.1.3 MANAGEMENT OF FOREIGN EXCHANGE RATE RISK

Due to the diversification of its activities and geographical locations, the Group is exposed to the risk of exchange rate fluctuations, which may have an impact on the translation differences affecting balance sheet items, Group financial expenses, equity and net income.

To limit exposure to foreign exchange risks, the Group has introduced the following management principles.

- Local currency financing: to the extent possible given the local financial markets' capacities, each entity finances its activities in its own accounting currency. When financing is contracted in other currencies, derivatives may be used to limit foreign exchange risks.
- Association of assets and liabilities: the net assets of subsidiaries located outside the Euro zone expose the Group to a foreign exchange risk. The foreign exchange risk in the consolidated balance sheet is managed either by matching with liabilities for acquisitions in the same currency, or by market hedging involving use of financial derivatives. Hedging of net assets in foreign currencies complies with risk/return ratio varying from 45% to 95% depending on the currency. If no hedging instruments are available, or if hedging costs are prohibitive, the risk on open foreign exchange positions is monitored by sensitivity calculations.
- Hedging of operating cash flows in foreign currencies: in general, the operating cash flows of EDF and its subsidiaries are in the relevant local currencies, with the exception of flows related to fuel purchases which are primarily in US dollars, and certain flows related to purchases of equipment, which concern lower amounts. EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, EDF Trading, Edison, EnBW, EDF Énergies Nouvelles) hedge firm or highly probable commitments related with these future operating cash flows.

After taking into account the financing and foreign exchange risk hedging policy, the Group's gross debt at December 31, 2009 breaks down as follows by currency after hedging as defined by IFRS: 50% in Euros, 35% in pounds sterling and 9% in US dollars. The balance of 6% includes the Swiss franc, the Hungarian forint, the Polish zloty, the Brazilian real and the Japanese yen.

**Gross debt structure at December 31, 2009, by currency, before and after hedging**

| December 31, 2009<br>*(in millions of Euros)* | Initial debt structure | Impact of hedging instruments (1) | Debt structure after hedges | % of debt |
|---|---|---|---|---|
| EUR | 37,232 | (10,356) | 26,876 | 50 |
| USD | 5,081 | (32) | 5,049 | 9 |
| GBP | 7,386 | 11,463 | 18,849 | 35 |
| Other currencies | 4,169 | (1,075) | 3,094 | 6 |
| **TOTAL DEBT** | **53,868** | | **53,868** | **100** |

(1) Hedges of liabilities and net assets of foreign subsidiaries, and USD/GBP swaps designated as economic hedges.

The table below presents the impact on equity of an unfavorable variation in exchange rates on the Group's gross debt at December 31, 2009. Sensitivity to foreign exchange risks remains stable overall compared to 2008.

**Sensitivity of the Group's gross debt to foreign exchange rate risks**

| December 31, 2009<br>*(in millions of Euros)* | **Debt after hedging instruments converted into Euro** | Impact of a 10% unfavorable variation in exchange rates | Debt after a 10% unfavorable variation in exchange rates | Impact on equity |
|---|---|---|---|---|
| EUR | **26,876** | - | 26,876 | - |
| USD | **5,049** | 505 | 5,554 | 135 |
| GBP | **18,849** | 1,885 | 20,734 | 381 |
| Other currencies | **3,094** | 309 | 3,403 | 161 |
| **TOTAL** | **53,868** | **2,699** | **56,567** | **677** |

Due to the Group's foreign exchange risk hedging policy for liabilities, the income statement for companies controlled by the Group is marginally exposed to foreign exchange rate risks.

The table below sets forth the foreign exchange position relating to net non-operating investments in foreign currency of the Group's principal subsidiaries at December 31, 2009.

### Net assets position

| December 31, 2009 *(in millions of currency units)* | Assets | Bonds | Derivatives | Net position after management (Assets) |
|---|---|---|---|---|
| USD | 6,369 | 1,750 | 4,305 | 314 |
| CHF (Switzerland) | 2,275 | 2,150 | - | 125 |
| HUF (Hungary) | 90,258 | - | 65,374 | 24,884 |
| PLN (Poland) | 2,373 | - | 1,079 | 1,295 |
| GBP (United Kingdom) | 13,876 | 3,049 | 7,144 | 3,683 |
| BRL (Brazil) | 654 | - | - | 654 |
| SKK (Slovakia) | - | - | - | - |
| CNY (China) | 700 | - | - | 700 |

The assets in the above table are the net assets of the Group's foreign subsidiaries in foreign currencies, adjusted for changes in the fair value of cash flow hedges and available-for-sale financial assets recorded in equity, and changes in the fair value of financial instruments recorded in income.

The following table sets forth the risk of foreign exchange loss in equity on the overall net position relating to the net non-operating investments in foreign currencies of the Group's principal subsidiaries at December 31, 2009, assuming unfavorable, uniform exchange rate variations of 10% against the Euro. Net positions are converted at the closing rate and impacts are reported in absolute value.

At December 31, 2009, net positions in USD and GBP were higher than in 2008 due to acquisitions of British Energy and 49.99% of Constellation Energy Nuclear Group.

### Sensitivity of net assets to exchange rate risks

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | Net position after management in currency | Net position after management, converted into Euros | Impact on equity of a 10% variation in exchange rates | Net position after management in currency | Net position after management, converted into Euros | Impact on equity of a 10% variation in exchange rates |
| USD | 314 | 219 | 22 | 503 | 361 | 36 |
| CHF (Switzerland) | 125 | 84 | 8 | 57 | 38 | 4 |
| HUF (Hungary) | 24,884 | 92 | 9 | 25,304 | 95 | 10 |
| PLN (Poland) | 1,295 | 315 | 32 | 353 | 85 | 9 |
| GBP (United Kingdom) | 3,683 | 4,147 | 415 | 870 | 913 | 91 |
| BRL (Brazil) | 654 | 260 | 26 | 518 | 160 | 16 |
| SKK (Slovakia) | - | - | - | 8,191 | 272 | 27 |
| CNY (China) | 700 | 71 | 7 | 627 | 66 | 7 |

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF SA's dedicated asset portfolio, which is discussed in section 9.9.1.6 ("Management of financial risk on EDF's dedicated asset portfolio").

The foreign exchange risk associated with short-term investments and operating liabilities in foreign currencies was not significant for the Group at December 31, 2009.

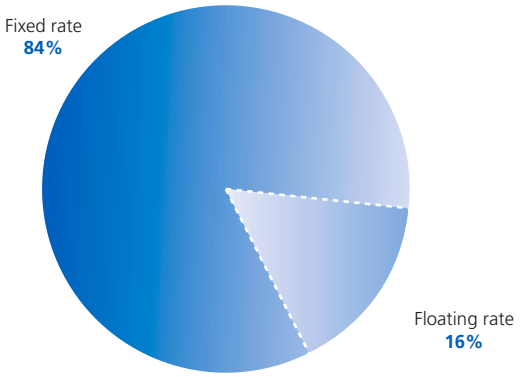
## 9.9.1.4 MANAGEMENT OF INTEREST RATE RISK

The Group's exposure to interest rate fluctuations covers two types of risk: a risk of change in the value of fixed-rate financial assets and liabilities, and a risk of change in the cash flows related to floating-rate financial assets and liabilities.

To limit exposure to interest rate risk, the Group (apart from entities it does not control operationally, notably Edison, EnBW and CENG) fixes principles as part of its general risk management policy, designed to limit the risk of change in the value of assets invested or possible increases in financial expenses.

EDF therefore uses dynamic allocation to spread exposure between fixed and floating rates according to expected market fluctuations in interest rates. This allocation may involve the use of interest rate derivatives for hedging purposes.

The Group's debt after hedging instruments at December 31, 2009 was structured as follows: 84% of debt bore interest at fixed rates and 16% at floating rates.




A 1% uniform annual rise in interest rates would generate an approximate €87 million increase in financial expenses at December 31, 2009, based on gross floating-rate debt after hedging under IFRS.

The average coupon on Group debt (weighted interest rate on outstanding amounts) was 4.4% in 2009.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at December 31, 2009. The impact of interest rate fluctuations remains stable compared to 2008.

### Group debt structure and sensitivity to interest rates

| December 31, 2009<br>*(in millions of Euros)* | Initial debt structure | Impact of hedging instruments | Debt structure after hedges | Impact of a 1% variation in interest rates |
|---|---|---|---|---|
| Fixed rate | 44,569 | 613 | 45,182 | - |
| Floating rate | 9,299 | (613) | 8,686 | 87 |
| **TOTAL BORROWINGS** | **53,868** | | **53,868** | |

Interest rate variations on fixed-rate debt have no accounting impact.

Concerning financial assets, the table below presents the interest rate risk on floating-rate bonds and negotiable debt securities at EDF SA, and their sensitivity to interest rate risks (impact on net income). As fixed-rate negotiable debt securities and bonds are mainly held as part of the dedicated asset portfolio, a detailed sensitivity analysis is provided in section 9.9.1.6.

### Sensitivity of floating-rate securities to interest rate risks

| December 31, 2009<br>*(in millions of Euros)* | Value | Impact on net income of a 1% variation in interest rates | Value after a 1% variation in interest rates |
|---|---|---|---|
| **FLOATING-RATE SECURITIES** | **212** | **2** | **210** |

## 9.9.1.5 MANAGEMENT OF EQUITY RISKS

The equity risk is concentrated in the following areas:

- **coverage of EDF's nuclear obligations**
  Analysis of the equity risk is presented in section 9.9.1.6, "Management of financial risk on EDF's dedicated asset portfolio";
- **coverage of employee benefit commitments for EDF, EDF Energy and British Energy**
  Assets covering EDF's employee benefit liabilities are partly invested on the international and European equities markets. Market trends therefore affect the value of these assets, and a downturn in equity prices could lead EDF to recognize actuarial losses above the "corridor" in income. 35.8% of the assets covering EDF's employee benefit liabilities were invested in equities amounting to €2,207 million at December 31, 2009.

  At December 31, 2009, the two pension funds set up by EDF Energy (EDF Energy Pension Scheme and EDF Energy Group Electricity Supply Pension Scheme) were invested to the extent of 42% in equities, representing an amount of £1,055 million of equities.

  At December 31, 2009, the British Energy pension funds were invested to the extent of 42% in equities, representing an amount of £1,187 million of equities.

- **CENG fund**
  CENG is exposed to equity risks in the management of its funds established to cover nuclear plant decommissioning and employee benefit obligations;
- **EnBW's reserved funds**
  EnBW is exposed to equity risks in the management of its reserved funds intended to cover its nuclear commitments and employee benefit obligations;
- **EDF's long-term cash management**
  At December 31, 2009, equity-linked investments included in long-term cash management investments by EDF SA totaled €219 million (1.9% of total liquidities), with estimated volatility of 10.0% (annualized volatility of monthly returns observed over three years or over the longest period available). Applying this volatility to the value of equity-correlated long-term cash management assets at the same date, EDF estimates the annual volatility of the equity-correlated portion of cash investments at €22 million;
- **direct investment securities**
  At December 31, 2009, EDF's investment in Veolia Environnement amounted to €423 million, with estimated volatility of 78.8% (annualized volatility of monthly returns observed over three years).

  At December 31, 2009, EDF's investment in AREVA amounted to €299 million, with estimated volatility of 59.0% (annualized volatility of monthly returns observed over three years).

### 9.9.1.6 MANAGEMENT OF FINANCIAL RISK ON EDF'S DEDICATED ASSET PORTFOLIO

The dedicated assets have been built up progressively by EDF SA since 1999 to cover future decommissioning expenses for the nuclear plants currently in operation, and the long-term storage of radioactive waste.

This dedicated asset portfolio, for which guiding principles were redefined in the law of June 28, 2006 on sustainable management of radioactive materials and waste, is managed under the supervision of the Board of Directors and its Committees (nuclear commitments monitoring Committee, audit Committee).

The **nuclear commitments monitoring Committee (CSEN)** is a specialized committee set up by EDF's Board of Directors when it updated its internal rules on January 25, 2007, in anticipation of the provisions of article 9 of the decree of February 23, 2007.

A **nuclear commitment financial expertise Committee (CEFEN)** exists to assist the company and its governance bodies on questions of association of assets and liabilities and asset management. The members of this Committee are independent of EDF. They are selected for their skills and diversity of experience, particularly in the fields of asset/liability management, economic and financial research, and asset management.

**Allocations to dedicated assets** in 2009 amounted to €1,902 million (see note 27.3.2.1 to the consolidated financial statements at December 31, 2009). In view of market conditions, these allocations were suspended from September 2008 to June 2009 and were resumed progressively in the second half-year of 2009. They will be adjusted as necessary for compliance with the regulatory requirement that liabilities should be covered by the portfolio by June 2011.

**Disbursements** for decommissioning expenses incurred in 2009 were financed by the dedicated asset portfolio to the extent of €302 million, compared to €266 million in 2008.

The governance principles set forth the decision-making and control structure for management of dedicated assets. The principles governing the asset portfolio's structure, selection of financial managers, and the legal, accounting and tax structure of the funds are also defined.

**Strategic asset allocation** is based on an asset/liability review carried out to define the most appropriate portfolio model for financing nuclear expenses. A benchmark index is also set for performance monitoring and control of the overall portfolio risk. Strategic allocation is regularly reviewed, in principle every three years unless circumstances require otherwise. Currently, assets are allocated 50% to international equities and 50% to bonds, although exposure may be different for reasons of tactical allocation. This flexibility was used to absorb the shock of the financial crisis, and the equities portion was reduced from early 2007 to mid-2009, then reinforced from the second half-year, and stood at 43% at December 31, 2009.

The portfolio contains two sub-portfolios, "equities" and "bonds", themselves divided into "secondary asset classes" or "pockets" that correspond to specific markets. A third sub-portfolio, "cash", is used to prepare and supply the disbursements related to amounts reversed from provisions for plants currently being decommissioned.

**Tactical asset management** is organized around four main themes:
- supervision of exposure between the two classes, "equities" and "bonds";
- choice of exposure by geographical area;
- marginal investment in alternative vehicles to those used in the strategic allocation;
- selection of investment funds, aiming for diversification:
  – by style (growth securities, unlisted securities, high-return securities),
  – by capitalization (major stocks, medium and small stocks),
  – by investment process (macroeconomic and sector-based approach, selection of securities on a "quantitative" basis, etc.),
  – by investment vehicle (for compliance with maximum investment ratios).

The allocation policy established by the operational management Committee [1] was developed on the basis of macro-economic prospects for each market and geographical area, and a review of market appreciation in different markets and market segments.

1. A permanent internal Committee for evaluation, consultation and operational decision-making for management of dedicated assets.

## EDF'S DEDICATED ASSET PORTFOLIO: CONTENT AND PERFORMANCE

At December 31, 2009, the stock market value of the dedicated asset portfolio was € 11,441 million (€ 8,655 million at December 31, 2008).

### Portfolio content under the classification from Article 4, decree 2007-243 of February 23, 2007

| Categories *(in millions of Euros)* | 12.31.2009 Book value in EDF SA's corporate financial statements | 12.31.2009 Stock market value | 12.31.2008 Book value in EDF SA's corporate financial statements | 12.31.2008 Stock market value |
|---|---|---|---|---|
| 1 Bonds, receivables and other securities issued or guaranteed by an EU member state or OECD country, etc. | 3,038 | 3,375 | 3,018 | 3,261 |
| 2 Bonds, negotiable bills, etc. issued by private sector entities | 604 | 642 | 1,011 | 1,025 |
| 3 Equities, shares and other securities traded on a recognized market, giving access to the capital of companies whose head office is located in the territory of a EU member state or OECD country | 117 | 142 | 75 | 75 |
| 4 Shares or units in funds investing in assets referred to in 1 to 3 | 6,599 | 6,708 | 4,044 | 4,072 |
| 5 Shares or units in funds investing principally in assets other than those referred to in 1 to 3 | 447 | 569 | 160 | 222 |
| 6 Real estate shares (shares in unlisted real estate companies) | None | None | None | None |
| 7 Deposits with BNP Paribas Securities Services | 0.025 | 0.029 | 0.039 | 0.039 |
| Other payables and receivables (dividends receivable, management fees, currency hedges, etc.) | 5 | 5 | - | - |
| **TOTAL DEDICATED ASSETS** | **10,810 (1)** | **11,441 (1)** | **8,308** | **8,655** |

*(1) In addition to the realizable value reported in note 27.2.3 to the December 31, 2009 consolidated financial statements, the portfolio's stock market value also includes foreign exchange hedges.*

## BREAKDOWN BY SUB-PORTFOLIO AND PERFORMANCE IN 2009

The breakdown of EDF's dedicated asset portfolio at December 31, 2009 and 2008 is as follows:

| | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Investments in equities | 43.2% | 33.5% |
| Investments in bonds | 56.8% | 66.5% |

The table below shows the performance by sub-portfolio at December 31, 2009 and at December 31, 2008.

| *(in millions of Euros)* | 12.31.2009 Stock market value | Performance for 2009 Portfolio | Performance for 2009 Benchmark index (1) | 12.31.2008 Stock market value | Performance for 2008 Portfolio | Performance for 2008 Benchmark index |
|---|---|---|---|---|---|---|
| Equities sub-portfolio | 4,939 | +28.06% | +25.94% | 2,896 | -38.90% | -37.64% |
| Bonds sub-portfolio | 6,501 | +5.40% | +4.35% | 5,759 | +5.88% | +9.35% |
| Cash sub-portfolio | 1 | +0.83% | +0.73% | - | +4.18% | +4.00% |
| **TOTAL DEDICATED ASSET PORTFOLIO** | **11,441** | **+13.07%** | **+15.10%** | **8,655** | **-14.91%** | **-16.70%** |

*(1) Benchmark index: MSCI World for the equities sub-portfolio, Citigroup EGBI for the bonds sub-portfolio, 50% MSCI World + 50% Citigroup EGBI for the total portfolio.*

EDF's dedicated asset portfolio benefited from the recovery on the international equity markets and the relative resilience on the various eurobond and credit markets. Thanks to careful allocation decisions and selection of securities and funds, the two sub-portfolios outperformed their benchmark indexes. In view of the financial crisis, which continued into 2009, a conservative approach was taken and the portfolio remained underexposed to equity risks: this led a slight overall underperformance compared to the composite benchmark index. The dedicated equities portfolio thus registered a gross change of €1,111 million (€728 million after taxes) in consolidated equity.

The distribution of the portfolio between reserved funds and other financial instruments is also presented in note 27.3.2 to the consolidated financial statements at December 31, 2009.

The valuation principles of dedicated assets and the general criteria for recognition of impairment are disclosed in the notes to the financial statements (notes 3.16.2.2 and 27.3.2.1). A total expense of €97million was recorded in 2009 in relation to impairment and losses on disposals.

EDF is exposed to equity risks and interest rate risks through its dedicated asset portfolio.

The market value of the "equities" sub-portfolio in EDF's dedicated asset portfolio was €4,939 million at December 31, 2009. The volatility of the equities sub-portfolio can be estimated on the basis of the volatility of the benchmark index, the MSCI World index, which at December 31, 2009 was 20.2% based on 52 weekly performances, compared to 31.8% at December 31, 2008. Applying this volatility to the value of equity assets at the same date, the Group estimates the annual volatility of the equities portion of dedicated assets at €998 million. This volatility is likely to affect the Group's equity.

At the end of December 2009, the sensitivity of the bond sub-portfolio (€6,501 million) was 4.29%, i.e. a uniform 100 base point rise in interest rates would result in a €279 million decline in market value which would be recorded in consolidated equity. This bond sub-portfolio sensitivity was also 4.29% in 2008.

### 9.9.1.7 MANAGEMENT OF COUNTERPARTY/CREDIT RISK

Counterparty risk is defined as the total loss that the EDF group would sustain on its business and market transactions if a counterparty defaulted and failed to perform its contractual obligations.

The EDF group has a counterparty risk management policy which applies to the parent company and all operationally controlled subsidiaries. This policy defines the organization of counterparty risk management and monitoring, and reporting procedures and circuits. It involves monthly consolidation of the exposures on financial and energy markets and half-yearly consolidation for all activities. The policy also close supervision of Group counterparties (daily review of alerts, special cautionary measures for certain counterparties).

These supervision procedures proved their robustness during the financial crisis, when the Group moved to a more frequent (quarterly) consolidation of all counterparty risks.

The table below gives details, by rating, of the EDF group's consolidated exposure at the end of September 2009. 88% of the main counterparties for the Group's business qualify as "investment grade", a stable proportion compared to the consolidated risk for December 2008.

| September 30, 2009 | AAA | AA | A | BBB | BB | B | CCC/C | Not rated | Total |
|---|---|---|---|---|---|---|---|---|---|
| Percentage of counterparties | 7% | 27% | 50% | 4% | 1% | 0% | 0% | 11% | 100% |

The exposure to counterparty risk by nature of activity is distributed as follows:

| September 30, 2009 | Purchases | Insurance | Sales and distribution | Cash and asset management | IPP | Energy purchases and trading | Total |
|---|---|---|---|---|---|---|---|
| Percentage of counterparties | 5% | 43% | 7% | 37% | 2% | 6% | 100% |

Exposure in the energy trading activities is concentrated at EDF Trading. Counterparty risk management for this subsidiary has explicit limits for each counterparty according to its financial robustness. A range of means are used to reduce counterparty risk at EDF Trading, primarily position netting agreements, cash-collateral agreements and introduction of guarantees from banks or affiliates.

Particularly for counterparties dealing with EDF's trading room, the Financial Risk Control team has drawn up a framework specifying authorization procedures and the methodology for calculation of allocated limits (which must correspond to requirements). The level of exposure can be consulted in real time and is systematically monitored on a daily basis. The suitability of limits is reviewed without delay in the event of an alert or unfavorable development concerning a counterparty.

The credit risk related to trade receivables is presented in note 29 to the 2009 consolidated financial statements ("Trade receivables").

## 9.9.2 Management and control of energy market risks

### 9.9.2.1 FRAMEWORK FOR MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

In conjunction with the opening of the final customer market, development of the wholesale markets and on the international scene, the EDF group is exposed to price variations on the energy market which can have a significant impact on its financial statements.

Consequently, the Group has an "energy markets" risk policy (for electricity, gas, coal, oil products and $CO_2$ emission quotas) applicable to EDF and operationally controlled subsidiaries.

This policy aims to:
- define the general framework in which the various Group entities carry out their operational activities (energy generation, optimization and distribution), and their interaction with EDF Trading;
- consolidate the exposure of the various entities and subsidiaries controlled by the Group on the structured energy-related markets;
- implement a coordinated hedging policy at Group level.

At Edison, EnBW and CENG, which are not operationally controlled by EDF, the energy market risk policy and associated control process are reviewed by the companies' governance bodies.

### 9.9.2.2 ORGANIZATION OF RISK CONTROL

The process for controlling energy market risks for entities operationally controlled by the Group is based on:
- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- an express delegation to each entity, formalized by risk management mandates, establishing risk limits and other information. These mandates enable the TOP4 to set an annual Group risk profile consistent with the financial objectives, and thus direct operational management of energy market risks within the Group, generally over 3-year market horizons; and,
- a specific control process, given its close interaction with the decisions made within the generation and supply businesses. This process involves Group management and is based on a risk indicator and measurement system incorporating escalation procedures in the event risk limits are exceeded.

The Group's exposure to energy market risks through operationally controlled subsidiaries is reported to the Comex on a monthly basis. The control processes are regularly reappraised and audited.

### 9.9.2.3 OPERATIONAL PRINCIPLES FOR ENERGY MARKET RISK MANAGEMENT AND CONTROL

The principles for operational management of energy market risks for operationally controlled entities are based on clearly-defined responsibilities for managing those risks, distinguishing between management of assets (generation and supply) and trading.

Managers of generation and supply assets are responsible for implementing a risk management strategy that minimizes the impact of energy market risks on their financial statements (the accounting classifications of these hedges are described in note 38 to the consolidated financial statements). However, a residual risk remains that cannot be hedged on the market due to factors such as insufficient liquidity or market depth, uncertainty over volumes, etc.

For operationally controlled entities in the Group, positions on the energy markets are taken predominantly by EDF Trading, the Group's trading entity, which operates on the markets on behalf of other group entities and for the purposes of its own trading activity. As such, EDF Trading is subject to a strict governance and control framework in line with current practices in trading companies. The principles for management of energy market risks presented above are unaffected by the acquisition of British Energy, whose portfolio has been absorbed into EDF Energy. This guarantees that all risks are measured, while the operational principles for the Group's energy market risk management continue to be rolled out to the new EDF Energy subgroup.

EDF Trading trades on organized or OTC markets in derivatives such as futures, forwards, swaps and options (regardless of the accounting classification applied at Group level). Its exposure on the energy markets is strictly controlled through daily limit monitoring overseen by the subsidiary's management and by the entity in charge of energy market risk control at Group level. Automatic escalation procedures also exist to inform members of EDF Trading's Board of Directors if risk limits (value at risk limit) or loss limits (stop-loss limits) are breached. Value At Risk (VaR) is a statistical measure of the company's potential maximum loss in market value on a portfolio in the event of unfavorable market movements, over a given time horizon and with a given confidence interval. EDF Trading assesses this VaR using the Monte Carlo method, which refers to historical volatilities and correlations estimated on the basis of market prices observed over the 40 previous trading days. The stop-loss limit stipulates the acceptable risk for the trading business by setting a maximum level of loss over a rolling three-month period. If the limit is exceeded, EDF Trading's Board of Directors takes appropriate action, which may include closing certain positions.

In the second half of 2009, EDF Trading's commitment on the markets was subject to a daily VaR limit of €48 million (with a daily confidence interval of 97.5%), and a stop-loss limit of €70 million. These limits were raised from their first-half 2009 level after EDF-Trading North America was included in EDF Trading's control framework. Over the same period VaR fluctuated between €8.6 million and €22.1 million, with an average of €14 million.

The table below shows the VaR and stop-loss limits for 2009 and 2008:

| *(in millions of Euros)* | 2nd half 2009 | 1st half 2009 | 2008 |
|---|---|---|---|
| VaR limit (97.5% 1-day) | 48 | 38 | 32 |
| Stop-loss limit | 70 | 55 | 45 |
| Minimum VaR | 8.6 | 7.6 | 6.5 |
| Average VaR | 14.0 | 13.4 | 14.8 |
| Maximum VaR | 22.1 | 25.1 | 30.5 |

Despite the very high volatility on the markets, the VaR and stop-loss limits were not exceeded in 2009 and EDF Trading's risks remained within the limits of the mandate from EDF at all times. The stop-loss has never been triggered since its introduction.

At EnBW [1], risk exposure is measured based on analyses of sensitivity to changes in market prices for each commodity. The table below shows the income statement and equity sensitivity for derivatives reported in the balance sheet at December 31, 2009:

| *(in millions of Euros)* | 2009 | | 2008 | |
|---|---|---|---|---|
| **Electricity** | | | | |
| Price variation | +25% | -25% | +25% | -25% |
| Impact on income | -130.4 | +130.4 | -73.3 | 73.3 |
| Impact on equity | +192.2 | -192.2 | -10.8 | 10.8 |
| **Coal** | | | | |
| Price variation | +30% | -30% | +45% | -45% |
| Impact on income | +16 | -16 | 36.8 | -36.8 |
| Impact on equity | +295.4 | -295.4 | 252.9 | -252.9 |
| **Oil** | | | | |
| Price variation | +40% | -40% | +40% | -40% |
| Impact on income | +9.2 | -9.2 | 16.6 | -16.6 |
| **Natural gas** | | | | |
| Price variation | +30% | -30% | +30% | -30% |
| Impact on income | +16.9 | -16.9 | 6 | -6 |
| **Emission certificates** | | | | |
| Price variation | +50% | -50% | +40% | -40% |
| Impact on income | +44.8 | -44.8 | 37.3 | -37.3 |

At Edison [2], the governance model separates risk management and control from operational trading activities. For operational purposes, Edison calculates its net exposure [3] based on its entire portfolio of assets and contracts (industrial portfolio), apart from those related to trading for the company's own purposes (trading portfolio).

The level of economic capital engaged in the markets, expressed in terms of Profit at Risk (PaR) [4], is then determined using this net exposure.

To meet obligations under IFRS 7, Edison measures the maximum potential decrease in the fair value of financial contracts hedging the risks on its industrial portfolio using a PaR (with a confidence interval of 97.5%). This risk is estimated at €87.4 million at December 31, 2009 in respect of 2010 (compared to €197.4 million at December 31, 2008 in respect of 2009). The difference is related to a decrease in the number of financial hedges, and to a lesser extent, a change in the profile of the risk to be hedged (concentration on shorter maturities that were less volatile in 2008).

For trading activities, which concern a different portfolio distinct from the industrial portfolio, Edison set a limit of 95% VaR of €2.6 million for 2009, and a stop-loss limit of €26.6 million. At December 31, 2009, VaR stood at 20% of the limit, with an average 29% for the year. Like the industrial portfolio, Edison's trading portfolio was allocated an amount of economic capital[5]. This allocation takes account of the risk capital related to the portfolio's VaR and the risk capital estimated through stress tests on any non-liquid structured positions. In 2009, the economic capital limit for trading activities was set at €40.9 million, and it was utilized to the extent of 20% at December 31, 2009, with an average of 36% over the year.

For SPE and CENG, convergence of risk management will be examined during 2010.

For an analysis of the fair value of the Group's commodity hedging derivatives, see note 41.5 to the consolidated financial statements for the year ended December 31, 2009. For details of commodity contracts not classified as hedges by the Group, see note 42.3 to the same consolidated financial statements.

## 9.9.3 Management of insurable risks

The EDF group has an extensive insurance program that is gradually being rolled out to controlled subsidiaries, including the regulated network operator subsidiaries with independent management (RTE EDF Transport and ERDF – Électricité Réseau Distribution France). The coverage, exclusions, excesses and limits are specific to each contract.

The main insurance programs are:

- conventional damage policy (Group): EDF is a member of OIL [6]. Additional insurance coverage is provided by Wagram Insurance Company [7] (a 100%-owned EDF subsidiary), other insurers and reinsurers;
- damage insurance for the aerial distribution networks of ERDF and the Island Energy Systems: the arrangements for setting up new aerial distribution network damage insurance for ERDF and EDF's Island Energy Systems are currently under examination;

1. Source: EnBW annual report.
2. Source: Edison annual report.
3. Net exposure is the residual exposure after using all natural hedging options provided by vertical and horizontal integration of the various techniques.
4. Profit at Risk or PaR is a statistical measure of the maximum potential decline, related to unfavourable market movements, in the margin compared to budget for a given time horizon and confidence interval.
5. Economic capital is the capital allocated to deal with market risks.
6. OIL Insurance Limited Mutual Insurance Company.
7. An Irish insurance company wholly-owned by EDF.

- damage insurance for the EDF group's nuclear facilities: in addition to coverage through membership of OIL, property damage related to EDF's nuclear installations in France (including following a nuclear accident) and nuclear decontamination costs have been covered since April 1, 2006 by an insurance policy involving the French nuclear pool and the European Mutual Association for Nuclear Insurance (EMANI), and EnBW benefits from similar coverage. Nuclear damage to British Energy installations is insured by the British pool NRI [1] and EMANI;
- civil liability insurance specific to nuclear facility operators: EDF's insurance policies meet French legal requirements;
- EnBW and British Energy also have similar civil liability insurance in compliance with German and British law respectively;
- general civil liability insurance: this program covers the Group against the possible financial consequences that could arise due to damage or injury (other than nuclear) caused to third parties;
- civil liability insurance for directors and senior executives: EDF's insurance program covers the Group's directors and Chief Executive Officers.

The total value of premiums for all these insurance programs was €96.3 million in 2009, of which €61.1 million was paid by EDF (see chapter 4.1.3 of the *Document de Référence*).

## 9.10 Provisions

The following table sets forth provisions (current and non-current) at December 31, 2009 and December 31, 2008, and assets set aside to secure financing of long-term obligations related to the EDF group's nuclear facilities:

| *(in millions of Euros)* | **12.31.2009** | 12.31.2008 |
|---|---|---|
| Provisions for spent fuel management | 11,147 | 8,806 |
| Provisions for long-term radioactive waste management | 7,426 | 6,732 |
| **Provisions for back-end nuclear cycle** | **18,573** | **15,538** |
| Provisions for decommissioning | 17,320 | 12,445 |
| Provisions for last cores | 3,033 | 1,697 |
| **Provisions for decommissioning and last cores** | **20,353** | **14,142** |
| Provisions for post-employment benefits | 13,118 | 12,703 |
| Provisions for other long-term employee benefits | 1,131 | 1,016 |
| **Provisions for employee benefits** | **14,249** | **13,719** |
| **Other provisions** | **4,817** | **4,738** |
| **TOTAL PROVISIONS** | **57,992** | **48,137** |

Coverage of long-term obligations for the EDF group's nuclear facilities:

| *(in millions of Euros)* | **12.31.2009** | 12.31.2008 |
|---|---|---|
| EDF: Dedicated assets | 11,436 | 8,658 |
| British Energy: Assets receivable from the NLF and the British Government | 6,399 | - |
| Other companies | 432 | - |
| **TOTAL ASSETS PROVIDING SECURE FINANCING FOR LONG-TERM OBLIGATIONS RELATED TO THE EDF GROUP'S NUCLEAR FACILITIES** | **18,267** | **8,658** |

(See notes 27.3.2.1.2 and 35.3.1 to the consolidated financial statements at December 31, 2009).

1. Nuclear Risk Insurers Limited.

# 9.11 Off balance sheet commitments (commitments given)

## Contractual obligations

The following table presents the contractual obligations identified by the Group at December 31, 2009:

| | 2009 | | | |
|---|---|---|---|---|
| *(in millions of Euros)* | **Total** | **Maturity within one year** | **Maturity between one and five years** | **Maturity after five years** |
| Long-term debt [1] | 53,868 | 9,927 | 15,667 | 28,274 |
| Finance lease commitments as lessee [2] | 219 | 37 | 112 | 70 |
| **On balance sheet contractual obligations** | **54,087** | **9,964** | **15,779** | **28,344** |
| Satisfactory performance, completion and bid guarantees | 1,297 | 620 | 638 | 39 |
| Commitments related to orders for operating items [3] | 4,562 | 2,360 | 1,655 | 547 |
| Commitments related to orders for fixed assets | 10,406 | 5,223 | 4,868 | 315 |
| Other operating commitments | 3,859 | 1,204 | 2,160 | 495 |
| **Contractual obligations related to performance of operating contracts [4]** | **20,124** | **9,407** | **9,321** | **1,396** |
| **Firm irrevocable purchase commitments [5]** | **51,578** | **9,071** | **17,502** | **25,005** |
| **Operating lease commitments as lessee [6]** | **2,461** | **534** | **1,382** | **545** |
| Security interest in real property | 2,767 | 207 | 1,101 | 1,459 |
| Guarantees related to borrowings | 323 | 23 | 48 | 252 |
| Other financing commitments | 241 | 182 | 10 | 49 |
| **Contractual obligations related to financing [7]** | **3,331** | **412** | **1,159** | **1,760** |
| Share and other asset purchase commitments | 4,405 | 1,976 | 2,490 | 39 |
| Other investment commitments given | 233 | 170 | 47 | 16 |
| **Contractual obligations related to investments [8]** | **4,738** | **2,146** | **2,537** | **55** |
| **Off balance sheet contractual obligations** | **82,232** | **21,570** | **31,901** | **28,761** |
| **TOTAL CONTRACTUAL OBLIGATIONS** | **136,319** | **31,534** | **47,680** | **57,105** |

*(1) See note 39.2.1 to the condensed consolidated financial statements at December 31, 2009.*
*(2) See note 25.3 to the condensed consolidated financial statements at December 31, 2009.*
*(3) Excluding commodities and energy.*
*(4) See note 12.3.1 to the condensed consolidated financial statements at December 31, 2009.*
*(5) See note 12.1 to the condensed consolidated financial statements at December 31, 2009.*
*(6) See note 12.4 to the condensed consolidated financial statements at December 31, 2009.*
*(7) See note 39.5 to the condensed consolidated financial statements at December 31, 2009.*
*(8) See note 27.5 to the condensed consolidated financial statements at December 31, 2009.*

The Company is not aware of any significant off-balance sheet commitments at December 31, 2009 other than those reported above.

**Contractual obligations related to performance of operating contracts** amounted to €20,124 million. In the course of its business, the Group provides contract performance guarantees, generally through the intermediary of banks. The Group has also given and received commitments jointly with third parties.

Contractual obligations related to performance of operating contracts are presented in note 12.3.1 to the 2009 consolidated financial statements.

**Firm irrevocable purchase commitments** (for electricity, natural gas, other energies and commodities and nuclear fuels) amounted to €51,578 million at December 31, 2009. In the course of its generation and supply activities, the Group has entered into long-term contracts for purchases of electricity, natural gas, other energies and commodities, and nuclear fuels, involving purchase commitments for periods of up to 20 years.

In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

EDF has also entered into long-term purchase contracts with a certain number of electricity producers, by contributing to the financing of power plants. For more details of these commitments, see note 12.1 to the 2009 consolidated financial statements.

**Operating lease commitments as lessee** amounted to €2,461 million (see note 12.4 to the 2009 consolidated financial statements).

**Financing commitments given**, totaling €3,331 million, comprise security interests in real property, guarantees related to borrowings and other financing commitments.

For details, see note 39.5 of the notes to the 2009 consolidated financial statements.

**Contractual obligations related to investments** include commitments for acquisition of equity investments and other investment commitments amounting to €4,738 million. For details, see note 27.5 of the notes to the 2009 consolidated financial statements.

# Capital resources and cash flows

# 10

For information pertaining to capital resources and cash flows, see section 9.8 ("Cash flows and financial debt") of this *Document de Référence*. For information pertaining to the issuer's financing structure, see section 9.9.1.1 ("Liquidity position and management of liquidity risk") in this *Document de Référence*.

# 11 Research and Development, Patents and Licenses



The Research and Development (R&D) Division of the EDF group has for main assignments to contribute to the improvement of the operational units' performance and to identify and prepare mid and long-term growth relays.

The validity of EDF group's renewed commitment relating to innovation and research is confirmed by the international and European context, characterized by:

- the progressive depletion of fossil resources (oil, gas, etc.), issues of reducing emissions of $CO_2$ and global warming, environmental and water usage issues;
- the worldwide development of research on new sustainable methods of electricity generation, replacement fuels but also energetic efficiency and demand management;
- the development of new information and communication technologies in technical systems;
- the changes due to the opening to competition of the energy markets.

## 11.1 Key figures

In 2009, the total amount of EDF research and development expenditures was €438 million, of which nearly €95 million for the protection of the environment. Expenditure concerning the protection of the environment relates in particular to research into efficient uses of energy, renewable energy, local impacts of climate change and studies related to other environmental problems (biodiversity, water quality, reduction of nuisances, etc.), (see also section 6.4.3.2.4 ("Continue research and development actions")).

At the end of 2009, EDF's Research and Development (R&D) Division had just over 2,000 employees.

## 11.2 R&D, an asset for the Group

### Contribute to the improvement of the operational units' performance

Every year, nearly three-quarters of EDF's R&D activities concerned projects directed by the operational divisions and by the Group's subsidiaries and are consequently meant to address certain specific issues.

Therefore, in the nuclear, hydropower and fossil-fired generation fields, EDF R&D on the one hand develops its tools and methods to improve operational performances and safely optimize the functioning life of the EDF group's means of generation, and on the other hand, anticipates new environmental requirements.

Concerning renewable sources of energy, R&D's objective is to identify technological breakdowns with significant competitive implications and contribute to the development of technologies considered more beneficial to the Group, notably solar and sea-based power.

With regard to the Group's marketing activities, R&D develops solutions for controlling energy demand and energy efficiency practices for the various market sectors and contributes to the preparation of new offers (integration of renewable energy, "comfort" solutions, etc.) essentially in residential housing. In addition, it proposes tools and methods for increasing knowledge of the client and improving sales management.

As for transmission and distribution activities, R&D acts as a support to integrate the new technologies dedicated to the performance of its businesses and to develop technical solutions aiming to increase the life of the materials and maximize the facilities' capacities to transmit energy.

For the Group's upstream/downstream optimization activities, R&D develops and refines the tools and valuation models of the Group's generation assets, in order to gain a better understanding of the functioning and to anticipate the evolution of markets (electricity, gas, emission allowances, etc.).

Furthermore, R&D is being carried out in the United Kingdom through the creation at the beginning of January 2010 of an R&D centre within EDF Energy.

## Brighten up the future and prepare the growth relays

With the growing importance of the world energy issues (the depletion of fossil energies, the greenhouse effect, global warming, methods of de-carbonizing practices in the electricity sector), R&D's commitment to the preparation of the future and future growth relays for the Group was continued in 2009 in line with the actions carried out for the past three years.

These mid and long-term activities defined for the period 2007-2009 take the form of twelve "R&D Challenges" for EDF, focused on the five underlying themes of the most important research issues for the EDF group and covering all of the Company's businesses.

In 2009, these twelve Challenges mobilized over 500 researchers, many players in the operational Divisions of the Group, as well as French and Foreign partners of EDF R&D.

For the period 2007-2009, EDF's twelve R&D Challenges[1] are:

### "OUR PLANET":

- Water: anticipate climate constraints on a shared resource;
- Improve the determination of the environmental impacts of our facilities.

### "OUR OPTIMIZATION":

- Anticipate the new energy environment;
- Optimize EDF's generation on the market: restructure methods and tools;
- Find new flexibility sources between consumption, generation and storage.

### "CUSTOMERS":

- Houses and buildings: develop technologies and services aiming to energetic efficiency;
- Industry: develop efficiency of old uses and new uses of electricity.

### "GENERATION":

- Technically allow the exploitation of nuclear power plants up to 60 years;
- Use new technologies to obtain a higher performance operation;
- Innovate in renewable energies and storage.

### "NETWORKS":

- Prepare the 2015's distribution (use of new information and communication technologies (NTIC) in the operation and management of networks, develop simulation tools to optimize their functioning, and technological innovations to favor the networks' performance, etc.).

### "DIGITAL SIMULATION":

- Simulate to make decisions.

## EDF R&D is an integral player in French, European and world research

To carry out its research and development programs, EDF R&D concludes numerous partnerships in France, in Europe (in particular, in countries where the Group is present) and worldwide. These partnerships aim to maintain our expertise at the highest level worldwide in certain fields representing the heart of EDF's goals and to complete our internal fields of knowledge.

The development and structuring of EDF R&D's partnerships have notably been carried out via the creation of a total of twelve shared laboratories with academic research partners, technical centers or industrialists.

One of these, the European Institute for Energy Research (EifER) is a result of EDF R&D's commitment in the German state of Baden-Wurtemberg realized in the form of a laboratory shared with the University of Karlsruhe. The partnership creation dynamic, which is becoming stabilized in France, must continue in Europe and the United States in order to accompany the international development of the EDF group. Each shared laboratory presents the opportunity to create a mixed team around a shared scientific and technical problem, with the aim of creating value, expertise and knowledge for all the partners. It is an asset for participation in cooperative projects launched in the context of the *Agence Nationale de la Recherche,* the *Agence de l'Environnement et de la Maîtrise de l'Énergie en France,* the European Commission's Seventh Framework Program and the French competitive clusters. Recognition of these laboratories in the scientific and technical community also involves their external evaluation by the *Agence (française) d'Evaluation de la Recherche et de l'Enseignement Supérieur (AERES).* This was the case in 2009, for example for the *Institut de Recherche et Développement sur l'Énergie Photovoltaïque,* a laboratory shared by EDF, the *Centre national de la recherche scientifique* (CNRS) and the *École nationale supérieure de chimie de Paris* (ENSCP).

In the nuclear energy sector, EDF has favored connections notably with the CEA and AREVA, taking the form of a tripartite agreement. In addition, EDF R&D is the first non-US partner of the American Research Institute EPRI (Electric Power Research Institute) for shared research programs, notably

1 These challenges will be updated during the second half of 2010.

concerning the ageing of materials and intelligent networks. This partnership also allows the Group to cooperate with most of the nuclear operators in the world.

In 2009, the partnership approach pursued by EDF R&D has translated in particular into the following events:

- Mitsubishi Heavy Industries (MHI) and the Central Research Institute of Electric Power Industry (CRIEPI) joined the MAI (Materials Aging Institute) research consortium created by EDF with TEPCO and EPRI, concerning the durability of materials;
- Edison joined the European Centre and Laboratories for Energy Efficiency Research (ECLEER) created by EDF with the *Ecole des Mines* and the *Ecole Polytechnique Fédérale de Lausanne,* concerning energy efficiency in buildings and industry;
- EDF joined the EPRI Smart Grid Demonstration Initiative Program (see section 6.3.2.4.4 ("Research and Development Activities in the United States"));
- the signatures of framework or partnership agreements with Imperial College (United Kingdom), Hydro Québec (Canada), the Massachusetts Institute of Technology (USA), (see section 6.3.2 ("United States of America"); the creation of a laboratory center for high performance calculation, the Modeling and Simulation Center (United Kingdom);
- EDF's involvement in numerous collaborative projects[1] in France and Europe, participation notably in several projects in the context of the Energy Technologies Institute (United Kingdom).

# 11.3 Intellectual property policy

Industrial property plays a major role in protecting the EDF group's technologies and know-how against competition, as well as in the capitalization of these assets through licensing.

## Patents

At the end of 2009, EDF's portfolio included 410 patented inventions protected by 1,200 intellectual property titles in France and abroad.

## Trademarks

"EDF" is a trademark registered in more than 60 countries. The Group's name is a fundamental part of its image and its assets. Thus, this trademark, the Internet domain names and the EDF logos are monitored constantly, in order to protect them against any fraudulent use which may harm the Group's image. The Group has also registered various other trademarks, in particular those related to the business of its various subsidiaries.

1 Examples include:

- project CARRIOCAS competitiveness cluster SYSTEM@TIC, whose objective is to design and develop hardware and software to meet, in competitive economic conditions, the industrial needs of interactive digital simulation on supercomputers and remote via network flow record 40 Gbit/s;
- project "Active Distribution networks with full integration of Demand and distributed Resources (ADDRESS)" of 7th European PCRD which aims to develop and validate technologies and technical innovative architectures for the development and the optimum utilization of flexibilities in the supply-demand balance of electrical systems.

# Information on trends

12



## 12.1 Performance improvement: "*Excellence Opérationnelle*" program

Implemented since 2008, the "*Excellence Opérationnelle*" program aims to improve in a continuous way the Group's performance in all respects (professions, finance, social and environmental responsibility):

- the "*Excellence Opérationnelle*" program is aimed not only at controlling the operating charges, but also at improving the gross margin (for instance by improving power plant availability and upstream/downstream optimization);
- it aims at increasing the EBITDA by improving the efficiency of operational process of generation (for instance shutdown of units and maintenance operations), marketing (for instance the processing of customers' demands), distribution (for instance the processing of electricity suppliers' demands and maintenance operations) ;
- in addition it aims to accelerate the cooperation projects in the areas of purchasing, information systems and real estate as well as the synergies between the Group's entities.

Its aim for the period 2008-2010 is to realize a €1 billion profit on the Group's 2010 EBITDA as compared to the one of 2007. Two thirds of this gain should come from French-based activities and one third from international activities.

The profits amount to €285 million in 2008 and €395 million in 2009. This is in line with the expectations of the Group.

Nearly all of the Group's entities and subsidiaries have started their program. At the end of 2009, more than 800 process transformation projects have been initiated. The progress of the projects is differentiated according to the complexity and depth of the transformations to be conducted in the operational process.

## 12.2 Development of electricity prices in France in January and February 2010

Electricity prices of the day for the day after (spot) in the first two months of 2009 have been negotiated, in average and baseload, at €49.7/MWh in France (-€6.9/MWh compared with the first two months of 2009), €53.1/MWh in Germany (+€0.4/MWh) and €42/MWh in Great Britain (-€15.8/MWh). Unusually cold temperatures led to an increase in French consumption of electricity, particularly heat sensitive, which is particularly sensitive to temperature, compared to the same period in 2009, while the winter of 2009 was already cold. However, the French prices have followed the price decrease in Europe, benefiting in particular imports from England, Belgium and Spain.

The English term prices fell compared to French and German prices which remained relatively stable. The base annual contracts prices were negotiated at an average of €51.2/MWh in France (+€0.1/MWh), €49.2/MWh in Germany (-€1/MWh) and €44.5/MWh in England (-€7.3/MWh). They closed the month of February at €50, €47.5 and €42.1/MWh respectively.

The decrease of British prices followed the decline in gas prices (-21% compared to the first two months of 2009 to 42.7 £/therm). However, oil prices have risen sharply compared to the first two months of 2009 (+69%, $75.9/barrel) and, to a lesser extent, coal prices (+15%, $96.5/t) and carbon rights (+14%, €13.1/t). The impact of the increase of energy commodities on the French and German prices was offset by the decline of the dollar against the euro (-7% compared to the first two months of 2009 at 0.715) and by a perception by the market players of a supply-demand balance in the medium term relaxed in France and Germany.

# 13 Financial outlook

## 2010 outlook

The beginning of 2010 was characterized by a slight economic recovery in Europe, moderate inflation and strengthening of the dollar and sterling against the euro. Additionally, economic policies were marked by increased emphasis on controlling public spending and expectations of gradual monetary policy tightening.

Against this backdrop, EDF is expecting electricity demand to stabilize in the Group's principal markets, with prices rising somewhat in France and Germany in particular.

Following an exceptionally difficult year in France in 2009, operating performance is expected to demonstrate a rebound in nuclear generation and a reversal of the nuclear availability trend. Business should be more stable in international markets.

Consequently, the Group is setting itself the following financial objectives for 2010:

- generate a substantial rise in EBITDA[1]. This growth will mainly come from an organic growth target (at constant scope and exchange rates, excluding the impact of IAS 39 and an end to TaRTAM on June 30, 2010) of between 3% and 5%, and also includes the full-year contribution of CENG and SPE;
- continue implement the Operational Excellence Program with a confirmed target of €1 billion at the end of 2010;
- dividend stability compared to 2009;
- generate substantial operating cash flow in order to finance operating investments, which should remain at a high level[2]. They include mainly the continued maintenance investments in France, which are closely linked to the performance of generation facilities and networks in the long term as well as development investments:
  - in France: continued investment in the Flamanville EPR, and new mid-merit and peak generation capacities,
  - internationally and in other businesses: combined-cycle installation in the United Kingdom, super critical coal plant in Germany, new nuclear power in the United Kingdom, United States and China, new wind and solar capacities at EDF Énergies Nouvelles, etc;
- maintain the Group's financial stability with a net debt/EBITDA ratio between 2.5 and 3.

These objectives are likely to change or to be modified owing to uncertainties related in particular to the economic, financial, competitive, regulatory and climatic environment in 2010. In addition, the materialization of certain risks described in Chapter 4 ("Risk factors") of the present *Document de Référence* would have an impact on the Group's activities and its ability to achieve its objectives. The achievement of the objectives, moreover, relies on the successful implementation of the strategy presented in section 6.1 of the present *Document de Référence*. EDF therefore makes no undertaking or guarantee concerning the achievement of those objectives mentioned in the present chapter.

*(1) Group scope as at December 31, 2009.*
*(2) Including investment programs of newly acquired companies.*

# 14 Administrative, management, and supervisory bodies and senior management



## 14.1 Board of Directors

### 14.1.1 Composition of the Board of Directors

In accordance with the article 6 of the French law of July 26, 1983 relating to the democratization of the public sector and the provisions of the amended decree-law of October 30, 1935, the Board of Directors of the Company is composed of 18 members, one third of whom are representatives of the employees and two thirds are persons appointed by the Shareholders' Meeting upon the proposal of the Board of Directors, subject to the representatives of the French State appointed by decree.

The mandates of members of the Board of Directors expired in 2009.

Until November 22, 2009 (included), the Board of Directors was composed of:

- six directors appointed by the EDF' Shareholders' Meeting: Mr. Pierre Gadonneix, Chairman and CEO, Mr. Frank Dangeard, Mr. Daniel Foundoulis, Mr. Bruno Lafont, Mr. Claude Moreau and Mr. Henri Proglio;
- six directors representing the French State, appointed by decree: Mr. Pierre-Marie Abadie, Mr. André Aurengo, Mr. Bruno Bézard, Mr. Yannick d'Escatha, Mr. Philippe Josse and Mr. Pierre Sellal[1];
- six directors elected by the employees: Ms. Marie-Catherine Daguerre, Mr. Jacky Chorin, Mr. Alexandre Grillat, Mr. Philippe Pesteil, Mr. Jean-Paul Rignac and Mr. Maxime Villota.

Since November 23, 2009, the Board of Directors is composed of:

- six directors appointed by the EDF' Shareholders' Meeting of November 5, 2009: Mr. Henri Proglio, Chairman and CEO, Ms Mireille Faugère, Mr. Philippe Crouzet, Mr. Michael Jay , Mr. Bruno Lafont and Mr. Pierre Mariani;
- six directors representing the French State, appointed by decree dated November 18, 2009: Mr. Pierre-Marie Abadie, Mr. Bruno Bézard, Mr. Yannick d'Escatha, Mr. Philippe Josse, Mr. Pierre Sellal and Mr. Philippe Van de Maele;
- six directors elected by the employees on May 19, 2009: Ms. Christine Chabauty, Mr. Alexandre Grillat, Mr. Philippe Maissa, Mr. Philippe Pesteil, Mr. Jean-Paul Rignac and Mr. Maxime Villota.

The duration of the mandate of Board of Directors' members is five years. In accordance with the law, they remain in office until the first meeting of the renewed Board of Directors. Therefore, the mandates of the above-mentioned members of the Board of Directors will expire at the end of November 2014. In case of a vacancy of the seat of a member of the Board of Directors for any reason whatsoever, his/her replacement will only hold office for the remaining duration of the term until the renewal of the full Board of Directors.

The Chief of the French State's Economic and Financial General Control Mission at EDF as well as the Secretary of the central works Council also attend the meetings of the Board of Directors with no right to vote.

(1) Pierre Sellal was appointed by decree dated April 1, 2009, replacing Mr. Gérard Errera.

## 14.1.2 Personal information on members of the Board

**COMPOSITION OF THE BOARD OF DIRECTORS AS OF THE DATE OF THE FILING OF THE PRESENT *DOCUMENT DE RÉFÉRENCE***

As of the date of the filing of the present *Document de Référence,* the directors of the Company were as follows:

| Family name, first name, date of birth and primary responsibility in the Company | Primary responsibility outside the Company | | Previous positions outside the Company within the past five years | |
|---|---|---|---|---|
| | Company / Organization | Position | Company / Organization | Position |
| **Henri PROGLIO**<br>Born on June 29, 1949<br>*Director since September 8, 2004*<br>*Chairman and CEO*<br>*since November 25, 2009* | Veolia Environnement | Chairman of the Board of Directors | Veolia Environnement | Chairman and CEO |
| | | | Veolia Water | Chairman of the Board of Directors |
| | Veolia Transport | Chairman of the Board of Directors | Dalkia France | Member and Chairman of the Supervisory Board |
| | Veolia Propreté | Chairman of the Board of Directors | | |
| | Transalpina di Energia | Chairman of the Board of Directors | Eolfi | Member and Chairman of the Supervisory Board |
| | EDF Energy Holdings | Chairman of the Board of Directors | Veolia Environmental Services UK | Director |
| | EDF Energy | Chairman of the Board of Directors | Veolia Transport Australasia | Director |
| | Veolia Environnement North America Operations | Director | Veolia Transport Northern Europe | Director |
| | Veolia Eau | Member of the Supervisory Board | Veolia Environmental Services Australia | Director |
| | Dalkia | Member of the A&B Supervisory Boards | Veolia Environmental Services North America | Director |
| | CNP Assurances | Director | Sarp Industries | Director |
| | Dassault Aviation | Director | Dalkia International | Director |
| | Natixis | Director | Siram | Director |
| | Edison | Director | Société des Eaux de Marseille | Director |
| | Atomic Energy Committee | Member | Lagardère | Member of the Supervisory Board |
| | | | Veolia Eau | Manager |
| | | | Elior | Director |
| | | | SARP | Director |
| | | | Thales | Director |
| | | | CNP Assurances | Member of the Supervisory Board |
| | | | Veolia Environmental Services Asia | Director |
| | | | VES | Director |
| | | | Casino Guichard Perrachon | Director |
| | | | Caisse nationale des Caisses d'Epargne | Censor of the Supervisory Board |

# Administrative, management,
## and supervisory bodies and senior management

| Family name, first name, date of birth and primary responsibility in the Company | Primary responsibility outside the Company | | Previous positions outside the Company within the past five years | |
|---|---|---|---|---|
| | Company / Organization | Position | Company / Organization | Position |
| **Pierre-Marie ABADIE**<br>Born on July 13, 1969<br>*Director since August 29, 2007* | General Division for energy and climate at the Ministry of Ecology, Energy, Sustainable Development and Sea | Energy Director | General division of energy and raw materials (ADEME) | Director |
| | National Agency for Radioactive Waste Management (ANDRA) | Government Commissioner | | |
| | AREVA NC | Deputy Government Commissioner | | |
| **Bruno BÉZARD**<br>Born on May 19, 1963<br>*Director since August 1, 2002* | *Agence des participations de l'État* (APE) at the Ministry of Economy, Industry and Employment | CEO | Dexia<br>Thales | Director<br>Director |
| | AREVA | Member of the Supervisory Board | | |
| | Grand Port Maritime de Marseille | Member of the Supervisory Board | | |
| | La Poste | Director | | |
| | Air France-KLM | Director | | |
| | *Fonds Stratégique d'Investissement* | Director | | |
| | France Télécom | Director | | |
| | SNCF | Director | | |
| **Christine CHABAUTY**<br>Born on July 19, 1971<br>*Director since November 23, 2009* | | Judge for labor litigations | | |
| **Philippe CROUZET**<br>Born on October 18, 1956<br>*Director since November 23, 2009* | Vallourec | Chairman of the Management Board | Vallourec | Director |
| **Yannick d'ESCATHA**<br>Born on March 18, 1948<br>*Director since November 20, 2004* | *Centre national d'études spatiales (CNES)* | Chairman | RATP<br>École Polytechnique | Director<br>Chairman of the Board of Directors |
| | *Université de technologie de Troyes* | Chairman of the Board of Directors | | |
| | *Académie des technologies* | Member | | |
| | Arianespace SA | Permanent representative of the CNES | | |
| | Arianespace Participation | Permanent representative of the CNES | | |
| | Thales | Director | | |
| **Mireille FAUGÈRE**<br>Born on August 12, 1956<br>*Director since November 23, 2009* | SNCF | Chairman advisor | SNCF-Voyages<br>SNCF Participations<br>Voyages-SNCF.com<br>SNCF-Voyages Développement | CEO<br>Director<br>Chairman<br>Chairman |
| **Alexandre GRILLAT**<br>Born on December 8, 1971<br>*Director since September 14, 2004* | | | | |

| Family name, first name, date of birth and primary responsibility in the Company | Primary responsibility outside the Company | | Previous positions outside the Company within the past five years | |
|---|---|---|---|---|
| | Company / Organization | Position | Company / Organization | Position |
| **Michael JAY**<br>Born on June 19, 1946<br>*Director since November 23, 2009* | House of Lords | Independent member (crossbench) of the House of Lords<br>Chairman of the House of Lords Appointments Commission<br>Member of the Sub-Committee of Foreign Affairs, Defense and Development policy of the EU Committee | Foreign and Commonwealth Office<br>British Council<br>St Antony's college Oxford | General Secretary<br>Trustee<br>Member |
| | Associated British Foods | Director | | |
| | Crédit Agricole SA | Director | | |
| | Valeo SA | Director | | |
| | Candover Investments | Director | | |
| | Merlin | Chairman | | |
| | Magdalen College (Oxford) | Honorary Fellow | | |
| **Philippe JOSSE**<br>Born on September 23, 1960<br>*Director since April 12, 2006* | Ministry of Budget, Public Accounts, Civil Service and State Reform | Director of the National Budget | | |
| | Air France-KLM | Director | | |
| | SNCF | Director | | |
| **Bruno LAFONT**<br>Born on June 8, 1956<br>*Director since May 20, 2008* | Lafarge | Chaiman and CEO | | |
| | World Business Council for Sustainable Development | Co-President of Cement Sustainability Initiative | | |
| | City Hall of Chongqin (China) | Counselor of the Mayor | | |
| **Philippe MAISSA**<br>Born on November 21, 1949<br>*Director since November 23, 2009* | | | | |
| **Pierre MARIANI**<br>Born on April 6, 1956<br>*Director since November 23, 2009* | Dexia | Executive Director and Chairman of the Management Committee | | |
| | Dexia Banque Belgique | Director | | |
| | Dexia Crédit Local | Director | | |
| | Dexia Banque Internationale | Director | | |
| **Philippe PESTEIL**<br>Born on September 1, 1957<br>*Director since September 14, 2004* | | | | |
| **Jean-Paul RIGNAC**<br>Born on May 13, 1962<br>*Director since November 7, 2007* | | | | |

# Administrative, management,
## and supervisory bodies and senior management

| Family name, first name, date of birth and primary responsibility in the Company | Primary responsibility outside the Company | | Previous positions outside the Company within the past five years | |
|---|---|---|---|---|
| | Company / Organization | Position | Company / Organization | Position |
| **Pierre SELLAL**<br>Born on February 13, 1952<br>*Director since April 1, 2009* | Foreign and European Affairs Ministry<br>AREVA<br><br>Atomic Energy Committee<br>*Institut du monde arabe*<br>*École nationale d'administration*<br>*Audiovisuel extérieur de la France*<br>*CulturesFrance*<br>*Agence nationale des titres sécurisés*<br>*Commission de récolement des dépôts d'œuvres d'art*<br>*Etablissement de préparation et de réponse aux urgences sanitaires* | General Secretary<br>Ambassador of France<br>Member of the Supervisory Board<br>Member<br>Member<br>Director<br>Director<br><br>Director<br>Director<br><br>Director<br><br>Director | European Union | Permanent Representative of France in Brussels |
| **Philippe VAN DE MAELE**<br>Born on December 29, 1961<br>*Director since November 23, 2009* | Agency of the environment and the energy management (ADEME)<br>CEMAGREF<br>National Agency for the Management of Radioactive Waste (ANDRA) | Chairman and CEO<br><br>Director<br>Director | | |
| **Maxime VILLOTA**<br>Born on November 25, 1959<br>*Director since December 13, 2006* | | | | |

# Personal information relating to the directors as of the date of the present *Document de Référence*

## DIRECTORS APPOINTED BY THE GENERAL SHAREHOLDERS' MEETING:

**Henri Proglio.** Born on June 29, 1949 in Antibes (France), Henri Proglio is a graduate of the *École des Hautes Etudes Commerciales* (HEC). He joined the Compagnie Générale des Eaux in 1972 and was appointed Chairman and CEO of the Compagnie Générales d'Entreprise Automobiles (CGEA) in 1990. He was appointed Vice-Chairman of Vivendi Universal and Chairman and CEO of Vivendi Water in 1999 before becoming Chairman of the Management Board of Veolia Environnement in 2000 and then Chairman and CEO from 2003 to November 2009. Henri Proglio is Chairman of the Board of Directors of Veolia Environnement, Veolia Propreté, Veolia Transport. He is director of Veolia Environment North America Operations. He is member of the Supervisory Board of Veolia Eau. He is member of Dalkia's A&B Supervisory Boards. He is Chairman of the Board of Directors of Transalpina di Energia, EDF Energy and EDF Energy Holdings. He is director of CNP Assurances, Dassault Aviation, Natixis and Edison. He is also member of the Atomic Energy Committee. Appointed director in September 2004, Henri Proglio has been the Chairman and CEO of EDF since November 25, 2009.

**Philippe Crouzet.** Born on October 18, 1956 in Neuilly-sur-Seine (France), Philippe Couzet is a graduate of the *Institut d'Études Politiques* (IEP, Paris) and of the *École Nationale d'Administration* (ENA). From 1981 until 1986, he was auditor and then Counsel *(maître des Requêtes)* at the French Council State. He joined the Saint-Gobain group in 1986 as Head of Corporate Planning. Within this group, he was successively CEO of Papeteries de Condat (1989-1992), General Delegate to Spain and Portugal (1992-1996), President of the Building Division of the Glazing Branch (1996), President of the Ceramics and Plastic Division (1996-2000), Vice-President in charge of Finance, Purchasing and Information Systems (2000-2005) and Vice-President in charge of the Building Distribution sector (2005-2009). Since April 1, 2009, Philippe Crouzet has been Chairman of the Management Board of Vallourec. He has been director of EDF since November 23, 2009.

**Mireille Faugère.** Born on August 12, 1956 in Tulle (France), Mireille Faugère is a graduate of the *École des Hautes Études Commerciales* (HEC). She began her career at SNCF in 1979, where she first held operational positions linked to the railway sector before joining the Research Direction. In 1989, she was entrusted with the mission to develop the TGV Méditerranée railway. In 1991, she was appointed director of the Montparnasse railway station in Paris. In 1993, Mireille Faugère was appointed as responsible for the Strategy Department within the Direction of economy, strategy and investment. From 1996 until 2001, she was in charge of the commercial and marketing department at the *Grandes Lignes Direction*. From 2001 until 2003, she was Chief Executive Officer of SNCF-Participations. From 2003 until 2008, she was a member of the executive Committee of SNCF and Manager of the Voyageurs France Europe branch. In July 2008, she was appointed Chief Executive Officer of SNCF Voyages. Since January 2010, Mireille Faugère has been advisor of the Chairman of SNCF. She has been director of EDF since November 23, 2009.

**Michael Jay.** Born on June 19, 1946 in Shawford (United Kingdom), Michael Jay is a graduate of the University of Oxford (Magdalen College) and the school of oriental and african studies of the University of London (SOAS). Following a career in the Foreign Office, he was British Ambassador in Paris from 1996 to 2001, Permanent under-Secretary at the Foreign Office and Head of the Diplomatic service from 2002 to 2006. He was the Prime Minister's personal representative for the G8 in 2005 and 2006. He has been a Crossbench member of the House of Lords since 2006. He was appointed Chairman of the House of Lords Appointments Commission in 2008. He is a member of the EU sub-committee on foreign, defence and development policy of the EU Committee of the House of Lords. He has been director of Associated British Foods since 2006, Crédit Agricole SA and Valeo SA since 2007 and Candover Investments since 2008. He is Chairman of Merlin. Michael Jay has also been an Honorary Fellow of Magdalen College of the University of Oxford since 2004. He has been director of EDF since November 23, 2009.

**Bruno Lafont.** Born on June 8, 1956 in Boulogne-Billancourt (France), Bruno Lafont is graduate of the *École des Hautes Etudes Commerciales* (HEC) and of the *École Nationale d'Administration* (ENA). He began his career at Lafarge in 1983. In 1994, he was appointed Vice President Finance of the Group and joined the group's Executive Committee. In 1998, he was appointed Chairman of plaster business. He was appointed in May 2003 Deputy Chief Executive Officer and then director on May 25, 2005. Appointed Chief Executive Officer on January 2006, he became Chairman and Chief Executive Officer of Lafarge in May 2007. He is the Co-President of the Cement Sustainability Initiative of the World Business Council for Sustainable Development (WBCSD). He is also counselor to the Mayor of Chongqing (China). He has been director of EDF since May 2008.

**Pierre Mariani.** Born on April 6, 1956 in Rabat, Morocco, Pierre Mariani is a graduate of the *École des Hautes Études Commerciales* (HEC) and of the *École Nationale d'Administration* (ENA) and graduate in law. From 1982 until 1986, he was an Inspector of finances at the General Inspection of the Ministry of the Economy and Finance. From 1986 until 1988, he was in charge of the transportation sector at the Budget Office of the Ministry of the Economy and Finance and then, from 1988 until 1992, director of the *Bureau de synthèse et de politique budgétaire* of the Ministry of the Economy and Finance. From 1992 to 1993, he was Deputy Chief in charge of the labour, employment, health and social security sector of the Ministry of the Economy and Finance. From 1993 until 1995, he was director of the office of the Budget Minister, Nicolas Sarkozy, and Government spokesman, head of communication. From 1995 until 1996, he was Chief Executive Officer of Société Française d'Investissements Immobiliers et de Gestion (SEFIMEG). From 1996 until 1997, he was Chief Executive Officer and member of the Management Board of Banexi (*Banque pour l'expansion industrielle*) and then, from 1997 until 1999, Chairman of the Management Board of Banexi. From 1999 until 2003, he was Director of the International Retail Banking Services of the BNP Paribas group. From 2003 to 2008, he was General Manager of International Retail Banking and Financial Services. At the beginning of 2008, he was appointed Vice-President, co-head of the Retail Banking, in charge of the International Retail Banking Services of BNP Paribas. Since October 2008, he has been Executive director and Chairman of the Management Committee of Dexia. He is director of Dexia Banque Belgium, Dexia Crédit Local and Dexia Banque Internationale in Luxembourg. He has been director of EDF since November 23, 2009.

# Administrative, management, and supervisory bodies and senior management

## DIRECTORS REPRESENTING THE FRENCH STATE:

**Pierre-Marie Abadie.** Born on July 13, 1969 in Brest (France), Pierre-Marie Abadie is a graduate of the *École Polytechnique*, and the *École Nationale supérieure des mines de Paris* and Mines chief engineer. He started his career as quality engineer in Peugeot Automobiles production center at Sochaux, then in Prague as engineer to the maintenance division of the company CSA (Air France). He was chief of industrial environment regional department, deputy director of the Industry Regional department, Research and Environment (DRIRE) of Lorraine department, then deputy of the department chief "Company Financing and Competititvity" before being appointed chief of the department "Housing and Decentralized Authorities Financing" at the Treasury Division. Then, he was consultant for the Industrial Affairs at Ministry of Defence cabinet from May 2002 to May 2007. From July 2007 to July 2008, he was Chief of Demand and of the Energetic Markets to the General Direction of energy and raw material division (DGEMP). Since July 2008, he has been Chief of the energy at the Energy and Climate Division (DGEC) at the Ministry of Ecology, Energy, Sustainable Development and Sea. He is also Government commissioner to the National Agency for the Management of Radioactive Waste (ANDRA) and Deputy Government commissioner at AREVA NC. He was director of the environment and energy management Agency in 2007 and 2008. He has been director of EDF since August 2007.

**Bruno Bézard.** Born on May 19, 1963 in Chauny (France), Bruno Bézard is a graduate of the *École Polytechnique* and the *École Nationale d'Administration* (ENA). He is general Inspector of finance. He was a Deputy Chief of insurance in the French Treasury Department, Deputy Director in the cabinet of Mr. Christian Sautter at the Ministry of Economy, Finance and Industry, Vice-Chairman of the *Club de Paris* and then advisor for economic and financial affairs in the cabinet of the Prime Minister Lionel Jospin. From July 2002 to March 2003, Mr. Bézard was Chief of Holdings and Financing under the authority of the French Treasury Department at the Ministry of Economy, Finance and Industry, prior to his appointment at the French State Holdings Agency *(Agence des participations de l'Etat,* APE*)* as Vice-President and then as Chief Executive Officer in February 2007. He is a member of the Supervisory Board of AREVA and of *Grand Port Maritime de Marseille*. He is also director of Air France-KLM, France Telecom, La Poste, SNCF, and of the *Fonds Stratégique d'investissement*. He has been director of EDF since August 2002.

**Yannick d'Escatha.** Born on March 18, 1948 in Paris (France), Yannick d'Escatha is a graduate of the *École Polytechnique* and an engineer from the *École des Mines*. He is a teacher-researcher at the *École Polytechnique*, the Paris National Mines School (*"Ecole Nationale Supérieure des Mines de Paris"*) and the National School for Advanced Technics (*"Ecole Nationale Supérieure de Techniques Avancées"*). Specialized researcher in ground, structural and fracture mechanics, he was appointed in 1978 Chief of the supervision of nuclear construction bureau where he was in charge of the technical control of the French State in the French electronuclear program. In 1982, he was on temporary assignment at the company Technicatome, a subsidiary of the French Atomic Energy Commission (CEA), specializing in nuclear engineering and notably in nuclear naval propulsion, and where he became Senior Executive Vice-President in 1987. He was appointed as Director of Advanced Technology Division at the CEA in 1990, deputy General Director in 1992 and General Director in 1995. In 1999, he was appointed as Chairman of CEA Industrie. He was appointed Deputy Chief Executive Officer of EDF in 2000. In 2003, he was appointed as Chairman of the *Centre National d'Etudes Spatiales* (CNES). Furthermore, he is a member of the *Académie des Technologies*, and Chairman of the Board of Directors of the *Université de Technologies* of Troyes. He is a permanent representative for CNES at the Board of Directors of Arianespace SA and Arianespace Participation and director of Thalès. He has been director of EDF since November 2004.

**Philippe Josse.** Born on September 23, 1960 in Saintes (France), Philippe Josse is a graduate from the *Institut d'Études Politiques* of Paris and from the *École Nationale d'Administration* (ENA). He started his career as an administrator in the Senate, then continued at the Ministry of the Economy and Finance, where he worked, in particular, as a Deputy Director of the Cabinet of the Minister of the Budget and Budgetary Reform, and as a Deputy Director of the Cabinet of the Minister of the Economy, Finance and Industry. In March 2006, he was appointed Budget Director at the Ministry of the Budget, Public Accounts, Civil Service and State Reform. He is a director of Air France – KLM and SNCF. He has been director of EDF since April 2006.

**Pierre Sellal.** Born on February 13, 1952 in Mulhouse (France), Pierre Sellal is a graduate of the Faculty of Law and Economic Sciences of Strasbourg and from the *École Nationale d'Administration* (ENA). He began his career as Secretary of Foreign Affairs to the Directorate of the United Nations from 1977 to 1980, then became technical advisor in the Office of the Minister of Foreign Trade (1980-1981). Adviser to the Permanent Representation of France to the European Communities in Brussels from 1981 to 1984, he then performs the functions of Head of International Relations at the Ministry of Industrial Redeployment and Foreign Trade (Oil directorate) until 1985. At that time, he was appointed Deputy Secretary General of the interministerial committee (SGCI) for issues of european economic cooperation, a position he held until 1990. Member of the working group charged with developing a future outlook of all the consequences of introducing the European single market from 1988 to 1990, he became Minister-Counselor at the French Embassy in Rome in 1990, then-Minister Counselor, Deputy Permanent Representative of France to the European Union in Brussels from 1992 to 1997. In 1997, he was appointed Director of European Cooperation in the Ministry of Foreign Affairs before being appointed Director of Cabinet of Minister of Foreign Affairs from 1997 to 2002. Ambassador, Permanent Representative of France to the European Union in Brussels from 2002 to 2009, he was awarded the title of Ambassador of France in November 2008. Pierre Sellal has been the Secretary General of the Ministry of Foreign and European Affairs since April 14, 2009. He is also a member of the Supervisory Board of AREVA and member of the Atomic Energy Committee. He has been director of EDF since April 2009.

**Philippe Van de Maele.** Born on December 29, 1961 in Neuilly-sur-Seine (France), Philippe Van de Maele is a graduate of the *École Polytechnique*, general engineer of the *Ponts et Chaussées*. He was a manager within the Haute-Garonne District facilities division from 1987 to 1991 and the District Division for Martinique from 1991 to 1994. He then joined the Ministry of Overseas as technical consultant to Dominique Perben for questions relating to the environment, infrastructures and housing. The reform of financing for subsidized housing was therefore one of his principal missions. With this experience, in 1995 he joined the cabinet of Éric Raoult, Minister of the City, where he contributed to the conception of the "*pacte de relance pour la ville*" with notably the creation of the first *zones franches urbaines* (ZFU). In 1998, he joined the Inter-American Development Bank in Washington. In 2002, he became Deputy Director of the Cabinet of Jean-Louis Borloo, Minister of the City and the urban renewal. He participated in the drafting and implementation of the planning law for the city and the urban renewal and the creation of the National Agency for Urban Renewal (*Agence nationale pour la rénovation urbaine* (ANRU)) of which he became the first Chief Executive Officer. In April 2008, he worked once again with Jean-Louis Borloo, Minister of Ecology, Energy, Sustainable Development and Planning in order to participate in the drafting and follow-up of the laws implementing the Grenelle Environment Round Table. Philippe Van de Maele is Chairman and CEO of the French Agency for Environment and Energy Management (*Agence de l'Environnement et de la Maîtrise de l'Énergie* – ADEME). He is director of CEMAGREF and the National Agency for the Management of Radioactive Waste (*Agence nationale pour la gestion des déchets radioactifs,* (ANDRA)). He has been director of EDF since November 23, 2009.

**DIRECTORS REPRESENTING THE EMPLOYEES:**

**Christine Chabauty.** Born on July 19, 1971 in Maisons-Laffitte (Yvelines), Christine Chabauty is a law graduate. She gained professional experience in a legal environment and in 2000 joined EDF's Commerce Direction as *attachée commerciale* in the Key customer accounts segment. Since December 2008, she also exercises a *conseiller prud'homal* mandate. Sponsored by the CGT, elected in May 2009, she has been director of EDF since November 23, 2009.

**Alexandre Grillat.** Born on December 8, 1971 in Béthune (France), Alexandre Grillat is a graduate of the *École Supérieure d'Électricité* and has an advanced degree in electrical engineering. He begins his career at EDF in 1996, first in EDF Gaz de France Distribution where he held various technical management, customer relations and sales positions, and then at the Strategy Division of the EDF group. He currently works in the office of the Deputy Chief Executive Officer of Électricité de Strasbourg. Sponsored by CFE-CGC, reelected in May 2009, he has been director of EDF since September 2004.

**Philippe Maissa.** Born on November 21, 1949 in Nice (France), Philippe Maissa is a graduate of the *École Nationale Supérieure des Industries Chimiques* in Nancy. After having held positions in the chemical industry, then at the *Centre d'études et recherches de Charbonnages de France*, he joined EDF in 1994. He is currently an engineer in the field of combustion and boilers at EDF's *Centre d'ingénierie thermique*. Sponsored by the CGT, elected in May 2009, he has been director of EDF since November 23, 2009.

**Philippe Pesteil.** Born on September 1, 1957 in Saint-Merd-de-Lapleau (France), Philippe Pesteil is an engineering graduate of the *Institut National des Sciences Appliquées* (INSA) in Lyon. He joined EDF in 1982 where he has held different engineering positions. He is a member of the internal audit team in the generation and hydraulic engineering division of EDF in Grenoble. Sponsored by CFDT, reelected in May 2009, he has been director of EDF since September 2004.

**Jean-Paul Rignac.** Born on May 13, 1962 in Rodez (France), Jean-Paul Rignac has a doctorate of the *Institut national polytechnique* of Toulouse in the energy field. He has been secretary of the EDF generation joint Committee Research and Development for five years. Since March 1991, he is engineer-researcher in the Research and Development Division of EDF (*Renardières* Center), and currently works on energy efficiency in the industrial buildings field. Sponsored by CGT, reelected in May 2009, he has been director of EDF since November 2007.

**Maxime Villota.** Born on November 25, 1959 in Joeuf (France), Maxime Villota starts working at EDF in 1981 at the Dampierre-en-Burly nuclear power plant, before joining Tricastin nuclear center for electricity generation in 1987. He is a procurement policy coordinator in this plant. He is a member of the trade unions *Fédération CGT Mines Énergie*. Sponsored by CGT, reelected in May 2009, he has been director of EDF since December 2006.

# 14.2 General management

## 14.2.1 Concurrent positions of Chairman of the Board of Directors and Chief Executive Officer

The Chairman of the Board of Directors, who holds the title of Chairman and Chief Executive Officer, is in charge of the management of the Company. He is appointed by decree upon a proposal of the Board of Directors.

Henri Proglio was appointed Chairman and Chief Executive Officer by decree of November 25, 2009, upon a proposal of the Board of Directors to the French President, succeeding Pierre Gadonneix, whose mandate expired on November 23, 2009.

## 14.2.2 Duties of the Chairman and Chief Executive Officer

The Chairman and Chief Executive Officer organizes and supervises the work of the Board of Directors, for which he is accountable at the Shareholders' Meeting. He oversees the functioning of the bodies of the Company and, in particular, ensures that the directors are in a position to accomplish their mandates.

Subject to the specific legal provisions governing public sector companies, to the powers that the law expressly attributes to Shareholders' Meetings and to the powers the law specifically assigns to the Board of Directors, and within the scope of the Company's corporate purposes, the Chairman and Chief Executive Officer is entrusted with far-reaching powers to act on behalf of the Company in all circumstances.

Upon a proposal of the Chairman and Chief Executive Officer, the Board of Directors may appoint one or more individuals with the title of Chief Officer(s) to take on the task of assisting the Chairman and Chief Executive Officer. The maximum number of Chief Officers is set at five. The Board of Directors establishes the duration of the term of office and, where applicable, the limits of the powers of each Chief Officer.

The mandates of Daniel Camus, Dominique Lagarde and Jean-Louis Mathias as Chief Officers expired on November 25, 2009.

## 14.2.3 Executive Committee

The Executive Committee ("Comex") is the strategic and dialogue body in charge of all transverse subjects related to the Group, the review of major decision projects and the monitoring of operational objectives and results.

## ADMINISTRATIVE, MANAGEMENT, AND SUPERVISORY BODIES AND SENIOR MANAGEMENT

In 2009, the Comex members were as follows:

| Name | Position | Date of 1st Appointment to the Comex |
|---|---|---|
| **Pierre Gadonneix*** | Chairman and Chief Executive Officer | November 30, 2004 |
| **Daniel Camus** | Chief Financial Officer | November 30, 2004 |
| **Jean-Pierre Benqué** | Senior Executive Vice-President North America | November 30, 2004 |
| **Bernard Dupraz** | Senior Executive Vice-President Generation & Engineering | November 30, 2004 |
| **Philippe Huet(1)** | Senior Executive Vice-President Strategy and Coordination. | April 8, 2008 |
| **Dominique Lagarde(1)** | Chief Human Resources and Communication Officer | April 1, 2008 |
| **Marianne Laigneau** | General Secretary | June 1, 2007 |
| **Pierre Lederer** | Senior Executive Vice President Customers | February 1, 2009 |
| **Bruno Lescoeur** | Senior Executive Vice-President Gas | April 1, 2006 |
| **Anne Le Lorier(1)** | Senior Executive Vice President Corporate Finance and Treasury | April 8, 2008 |
| **Jean-Louis Mathias** | Chief Operating Officer Integration and Deregulated Operations France | November 30, 2004 |
| **Umberto Quadrino** | Chief Executive Officer of Edison | April 1, 2006 |
| **Vincent de Rivaz** | Chief Executive Officer of EDF Energy | November 30, 2004 |
| **Hans-Peter Villis** | Chairman of the Management Board of EnBW | October 1, 2007 |
| **Gérard Wolf** | Senior Executive Vice-President, International Operations and Group Synergies | April 1, 2006 |

** Until November 23, 2009.*
*(1) Effective as of May 20, 2008.*

As of February 4, 2010 the Comex members are as follows:

| Name | Position | Date of 1st Appointment to the Comex |
|---|---|---|
| **Henri Proglio** | Chairman and Chief Executive Officer | November 25, 2009 |
| **Daniel Camus** | Group Executive Vice President in charge of International Activities and Strategy | November 30, 2004 |
| **Pierre Lederer** | Group Executive Vice President in charge of Supply, Optimisation and Trading | February 1, 2009 |
| **Denis Lépée** | Secretary of the Executive Committee | February 4, 2010 |
| **Hervé Machenaud** | Group Executive Vice President in charge of Generation and Engineering | February 4, 2010 |
| **Jean-Louis Mathias** | Group Executive Vice President in charge of the coordination of the French activities and Human Ressources | November 30, 2004 |
| **Thomas Piquemal** | Group Executive Vice President in charge of Finance | February 4, 2010 |
| **Bernard Sananes** | Group Executive Vice President in charge Communication and Public and European Affairs | February 4, 2010 |
| **Alain Tchernonog** | General Secretary | February 4, 2010 |

**Daniel Camus.** 57 years old, PhD in Economics, Associate Professor in Management Sciences and a graduate of the *Institut d'Études Politiques* (IEP, Paris). Daniel Camus joined EDF in 2002 after 25 years working in chemicals and pharmaceuticals within the Hoechst Group in Germany, the United States, Canada and France. There, he held the post of Director of Development at Hoechst Canada Inc., followed by those of Financial Director and member of the Management Board of Roussel Uclaf SA, Hoechst Marion Roussel AG and Aventis Pharma AG, created by the merger between Hoechst and Rhône Poulenc. He led the transformation of these companies' finances at a global level and the successive mergers which gave rise to the formation of Aventis. From 2002 to 2009, Daniel Camus has been EDF's Chief Financial Officer. He steered the opening up of the EDF group's capital, then successfully led most of the strategic projects relating to the Group's international activity, such leading the Edison deal in Italy, the withdrawal from Latin America, the acquisition of British Energy in the United Kingdom and the acquisition of an equity interest in Constellation in the United States. Daniel Camus is currently Group Executive Vice President in charge of International Activities and Strategy.

**Pierre Lederer.** 60 years old, a graduate of Physical Science and Mathematics. Pierre Lederer joined EDF in 1974, where he has held a variety of posts in the General Economic Studies Department, the Energy Transmission Department and the Thermal Generation Department. He was appointed Head of the General Economic Studies Department in 1992, Head of Corporate Strategy, in 1996, then Director of "Strategy-Promotion-Optimisation" at the Group's Industry Unit in 1999. In 2000, he joined the Executive Management Board of EnBW, the third-ranking German energy specialist 45% owned by EDF, and became Vice President of the Management Board in 2007. As Chief Operating Officer, he was instrumental in developing sales processes for the opening up of energy markets. He also implemented the optimisation of the value chain and the management of market risks as well as launching the replacement of all the company's generation plants. In February 2009, Pierre Lederer was appointed Senior Executive Vice President of EDF, in charge of Customers. He is keen to redefine the strategic objectives of the Customers Division: satisfy the customer, position energy efficiency at the heart of the business, support customers in reducing $CO_2$ emissions and develop energy teleservices. Pierre Lederer is currently Group Executive Vice President in charge of Supply, Optimisation and Trading.

**Denis Lépée.** 41 years old, a graduate of the *Institut d'Études Politiques* (IEP, Paris), a History graduate and holder of a *Deug* (Preliminary degree course) in Philosophy. Denis Lépée was adviser to the Secretary General of the *Rassemblement Pour la République* political party from 1995 to 1997, then Director of the Office of the President of the General Council of the Oise from 1998 to 2003. He then joined Veolia Environnement before becoming in 2007 special adviser for Henri Proglio, Chairman and CEO. Denis Lépée joined EDF on November 25, 2009 as advisor to the Chairman. He is also the author of four novels and several biographies. Denis Lépée is currently Secretary of the Executive Committee of the EDF group.

**Hervé Machenaud.** 62 years old, a former student of the *École Polytechnique* (1968), engineer of the *École des Ponts et Chaussées* (Structural Engineering School) and a graduate of the *Institut d'Études Politiques* (IEP, Paris). Hervé Machenaud started his career as Director of the Urban Planning Division at the Ivory Coast Ministry of Planning in 1973, then undertook a variety of assignments on the African continent for the World Bank before returning to France in 1978 as Structural Engineer for the Department of Ille-et-Vilaine. Hervé Machenaud joined the EDF group in 1982 as Deputy Director of Development at the Paluel Nuclear Plant. From 1984 to 1989, he took charge of the Group's expansion into China, in particular the construction and commissioning of the Daya Bay Nuclear plant. Between 1990 and 1995, Hervé Machenaud held the post of Head of the National Nuclear Infrastructure Center (CNEN), responsible for the Group's French and international nuclear programmes. In this context, he steered the design, construction and commissioning of the N4 series (nuclear plants at Chooz and Civaux), the world's most advanced reactors, equipped with a computer-assisted control system which remains unique. From 1995 to 1998, he was EDF's Deputy Director of Infrastructure, responsible for Resources, Management and International Development. From 1998 to 2002, he filled the role of Head of Generation and Transmission of EDF, then Deputy Director of the Industry Branch. From 2002 to 2009, he was based in Beijing as Executive Vice President, Asia, whose role is to enhance the Group's industrial expertise, particularly nuclear, and to ensure it has access to technological innovations in China, Japan, India and in the Great Mekong region. In particular, he spearheaded the joint venture projects in the fields of nuclear (Taishan), thermal (Sanmenxia), hydraulic and wind generation in China, Vietnam (the Phu My plant) and Laos (the Nam Theun barrage). He is currently Group Executive Vice President in charge of Generation and Engineering.

**Jean-Louis Mathias.** 62 years old, a graduate of the *École Polytechnique*, the *École Nationale de la Statistique et de l'Administration Économique* (ENSAE), the *Centre de Perfectionnement aux Affaires* (CPA) and holds a degree in sociology. Jean-Louis Mathias is member of Dalkia's Supervisory Board and director of EDF Énergies Nouvelles. After serving from June 2002 as Vice-President of Gaz de France group, he joined EDF in September 2004 as advisor to the Chairman. In November 2004, he is appointed Chief Operating Officer. He is currently Group Executive Vice President in charge of the coordination of the French activities and Human Resources.

**Thomas Piquemal.** 40 years old, a graduate of the *École Supérieure des Sciences Économiques et Commerciales* (ESSEC – College for Economics and Business). Thomas Piquemal started his career in 1991 with the audit firm Arthur Andersen. In 1995, he joined the Mergers and Acquisitions Department of the bank Lazard Frères. In this context, he was involved in the major financial and strategic transactions of Veolia, in particular the company's capital restructuring and the EDF/Dalkia partnership. In 2008, he took over responsibility in London for the strategic partnership signed between Lazard and the American investment fund Apollo. In January 2009, Thomas Piquemal joined Veolia Environnement as Vice President in charge of Finance and joined the Group's Executive Committee. In this post he devoted his efforts to debt reduction, in particular through an asset disposal programme. In addition, in conjunction with the *Caisse des Dépôts* (French bank for official deposits) he managed the merger of their respective subsidiary companies, Transdev and Veolia Transport, to create a world leader in collective passenger transportation and sustainable mobility. In 2008, together with three-time world boxing champion Christophe Tiozzo, Thomas Piquemal founded the "*Académie Christophe Tiozzo*", whose mission is to promote the social and professional integration of young people from deprived areas. Thomas Piquemal is currently Group Executive Vice President in charge of Finance.

**Bernard Sananès.** 46 years old, a graduate of the Political Science School at Aix-en-Provence and of the *Institut pratique de journalisme* (Practical Journalism Institute). Bernard Sananès started his career as a journalist then as Head of Communications for the UDC group at the National Assembly. From 1993 to 1995, he was Communication Adviser to the Minister for Infrastructure, Transport and Tourism before joining the Euro RSCG group. Bernard Sananès held the posts of Associate Director, partner and finally Chief Executive Officer of Euro RSCG C&O. Bernard Sananès has supported numerous companies and their managers in the course of consultancy missions on the issues of global communication. He is also a specialist in the communication of influence, that is to say, the relationship between a company and its stakeholders (journalists, decision-makers, and the financial community). In this role, he has steered a successful course for major financial transactions such as EDF's IPO on the stock market. He has also provided advice to political

figures. Bernard Sananès is currently Group Executive Vice President in charge of Communication and Public and European Affairs.

**Alain Tchernonog.** 65 years old, PhD in law and a graduate of the *Institut d'Administration d'Entreprises* (Business Administration Institute). Alain Tchernonog started his career in 1972 as a lawyer specialising in International law at the *Centre National d'Etudes Spatiales* (National Centre for Space Studies) before becoming head of the Legal Department of the ANVAR (State Technology Transfer Agency) in 1974. From 1979 to 1990, he was Director of the Contracts Department at Roussel-UCLAF. From 1990, he held the post of General Counsel within the Pierre Fabre Group (1990-1995), then at the Compagnie Générale d'Entreprises Automobiles (1995-2000). In 2001, he joined the Veolia Environnement Group as General Counsel then as Corporate Secretary in March 2007. Alain Tchernonog is currently General Secretary of the Group.

## 14.2.4 Sustainable development Panel, environmental, social, scientific, and medical councils

EDF has also established a sustainable development Panel, an environmental Council, a social Council, a scientific Council and a medical Council, open to persons contributing their experience and expertise, in order to integrate these aspects into EDF's major strategic trends.

The Group sustainable development Panel, renewed in 2008, is a body for dialogue bringing together, under the honorable presidency of D[R] Rajendra Pachauri (Chairman of the GIEC and Chief Executive Officer of TERI), guests that are international, independant and specialist in the fields relating to the issues involving the Group, or that represent the expectations and interests of civil society. It also includes, as statutory members, the Chairmen of the environmental, company and scientific Committees, as well as the Chairman of EDF Energy's Stakeholder Advisory Panel (created en 2006). The Group sustainable development Panel provides advice and a critical appreciation of the Group's commitments with regard to Sustainable Development and their implementation. It meets once or twice per year in the presence of the Group's Board and examined in 2009 topics including the acceptability of nuclear energy and access to energy, in line with the main subjects of the environmental and company Committees in 2009.

The environmental Council (created in 2001) is consulted to provide an outside view and a multidisciplinary approach on the strategy, actions and environmental outcomes of EDF. It is chaired by Jean Jouzel, Director of the *Institut Pierre Simon Laplace* (research federation of the CNRS regrouping six laboratories involved in the research on the terrestrial and planetary environment). The environmental Council debated in November 2009 the management of nuclear waste.

The social Council (created in 2008), chaired by the philosopher Dominique Bourg, examines the society strategy of EDF. The social Council devoted its work in 2009 on access to energy, the vulnerable and fuel poverty, in the developed and developing countries, as well as employability and diversity.

Created in 1987, the scientific Council of EDF is an advisory body providing the Company with the guidance and advice of senior scientists in choosing its research activities in the medium and long term. It meets three times a year to discuss thematic issues prepared before the meetings and subject to a detailed report. Its Chairman is Pierre Castillon, founding president of the Academy of Technologies. In 2009, three themes were subject to the scientific Council's opinion: the evolved counting to serve the efficiency of power system, hydrogen and hydropower.

Composed of personalities from the medical world, specialist doctors, university professors, the medical Council of EDF is a body reflecting and providing advice on a number of current topics regarding health at work, public health and environmental health in connection with the EDF's activities. Under the chairmanship of André Aurengo, Professor of Biophysics, Chief of the Pitié-Salpêtrière nuclear medicine department and member of the Medicine Academy, the medical Council meets on average three times a year to discuss topics such as the electromagnetic fields, mental health, the risk of pandemic influenza. In 2008, the conclusions of the Council regarded namely the report of the IARC and the medicine and science academies on the causes of cancer as well as on the burden of diseases which could result from it in an industrial enterprise. In 2009, the work of the Council focused on the treatment of anxiety disorders, depression and H1N1 epidemic.

# 14.3 Absence of family ties, convictions and conflicts of interest of EDF directors and Executive Officers

## 14.3.1 Absence of family ties among EDF directors and Executive Officers

To EDF's knowledge, there is no family relationship among (i) EDF directors or (ii) Comex members.

## 14.3.2 Absence of convictions for fraud of EDF directors

To EDF's knowledge, none of the (i) EDF directors or (ii) Comex members has been:

- convicted of fraud in the past five years;
- declared bankrupt or had their property impounded or liquidated in the past five years;
- the subject of an official accusation and/or penalty delivered by legal or regulatory authorities in the past five years.

In addition, to EDF's knowledge, in the past five years, none of its (i) directors and (ii) Comex members has been prevented by a court from becoming a member of an administrative, management or supervisory body of a listed company, or from being involved in the management or direction of the affairs of such a company.

## 14.3.3 Conflict of interest of directors and Executive Officers

To the Company's knowledge as of the date of the filing of the present *Document de Référence*, there are no potential conflict as regards EDF, between the duties of EDF, directors and Comex members on the one hand and their private interests or other duties, on the other.

If a strict application of the criteria laid down in the report prepared by the Medef and AFEP could lead to some of them being considered as not independent, the Company considers that each of them has the abilities and professional experience necessary to the Company and enjoys complete freedom and independence of judgment.

To the Company's knowledge, there is no agreement entered into by shareholders, customers, suppliers, or others according to which a director has been appointed as either a director or an executive officer.

To the Company's knowledge, no director has agreed to restrict for a fixed period of time his ability to sell his equity holdings in the company, except for the restrictions resulting from the stock exchange ethics charter mentioned in section 16.6 ("Stock exchange ethics charter").

In addition, the directors and executive officers holding their equity interest through a FCPE of EDF group invested in the share capital of EDF, or who acquired EDF shares from the French State in the legal framework of the privatization regime are subject to the applicable non-transferability and lock-up rules.

# Compensation and benefits

15



## 15.1 Compensation of directors and Chief Officers

The tables below show the compensation and the various benefits paid and owed to each of EDF's directors and Chief Officers during the 2008 and 2009 financial years by EDF and its controlled subsidiaries as of December 31, 2009.

### Table 1 of the AMF recommendations

**SUMMARY TABLE OF THE REMUNERATION OF, AND THE OPTIONS AND SHARES GRANTED TO, EACH CHIEF OFFICER**

| | 2009(1) | 2008 |
|---|---|---|
| **Pierre Gadonneix, Chairman of the Board of Directors(2)** | | |
| **Compensation owed for the year** (details in table 2) | 728,994 | 1,127,511 |
| **Henri Proglio, Chairman of the Board of Directors(3)** | | |
| **Compensation owed for the year** (details in table 2) | 153,677 | Not applicable |
| **Daniel Camus, Chief Financial Officer** | | |
| **Compensation owed for the year** (details in table 2) | 603,779 | 1,015,513 |
| **Dominique Lagarde, Chief Human Resources and Communications Officer** | | |
| **Compensation owed for the year** (details in table 2) | 296,116 | 245,236(4) |
| **Yann Laroche, Chief Human Resources and Communications Officer** | | |
| **Compensation owed for the year** (details in table 2) | Not applicable | 193,634(5) |
| **Jean-Louis Mathias, Chief Operating Officer, Integration and Deregulated Operations in France** | | |
| **Compensation owed for the year** (details in table 2) | 526,445 | 781,837 |
| **TOTAL (IN EUROS)** | **2,309,011** | **3,363,731** |

*(1) Compensation owed for 2009 does not include the variable portion due for 2009, which had not been determined at the date of publication of the Document de Référence. It comprises salaries and benefits in kind until November 25, 2009 (except as regards to Henri Proglio).*

*(2) For the term of office held from January 1, 2009 to November 23, 2009.*
*(3) For the term of office held since November 25, 2009.*
*(4) For the term of office held from May 20, 2008 to December 31, 2008.*
*(5) For the term of office held from January 1, 2008 to May 20, 2008.*

# Table 2 of the AMF recommendations

**SUMMARY TABLE OF THE REMUNERATION OF, AND THE OPTIONS AND SHARES, GRANTED TO EACH CHIEF OFFICER**

**Pierre Gadonneix,**
**Chairman of the Board of Directors**
**(until November 23, 2009)**

| | Amount for 2009[1] | | Amount for 2008 | |
|---|---|---|---|---|
| | due | paid | due | paid |
| Fixed salary | 723,158 | 723,158 | 760,000 | 760,000 |
| Variable salary | Not available[2] | 361,780 | 361,780 | 326,830 |
| Exceptional salary | - | - | - | - |
| Directors' fees | - | - | - | - |
| Benefits in kind[3] | 5,836 | 5,836 | 5,731 | 5,731 |
| **TOTAL (IN EUROS)** | **728,994** | **1,090,774** | **1,127,511** | **1,092,561** |

Following the proposal by the appointments and remuneration Committee approved by the Minister of the Economy, Industry and Employment and the Minister of Ecology, Energy, Sustainable Development and Sea, at its meeting of February 10, 2010 the Board of Directors set the gross annual salary of Henri Proglio, Chairman and Chief Executive Officer, at €1,000,000, plus a variable salary of up to 60% of that amount, 70% for quantitative performance and 30% for qualitative performance, conditional on achievement of objectives to be set for the year 2010 by the Board of Directors for a decision. Furthermore, the Board of Directors also decided to set Henri Proglio's salary for the year ended December 31, 2009 at €101,370 (fixed) and €52,307 (variable).

**Daniel Camus,**
**Chief Financial Officer**
**(until November 25, 2009)**

| | Amount for 2009[4] | | Amount for 2008 | |
|---|---|---|---|---|
| | due | paid | due | paid |
| Fixed salary | 597,575 | 597,575 | 628,000 | 628,000 |
| Variable salary | Not available[2] | 620,745* | 380,745* | 237,734 |
| Exceptional salary | - | - | - | - |
| Directors' fees | Not applicable | Not applicable | Not applicable | Not applicable |
| Benefits in kind[5] | 6,204 | 6,204 | 6,768 | 6,768 |
| **TOTAL (IN EUROS)** | **603,779** | **1,224,524** | **1,015,513** | **872,502** |

** Including €345,000 for a three-year bonus paid in 2009 for the period 2006-2008, of which €105,000 related to 2008.*

**Dominique Lagarde,**
**Chief Human Resources**
**and Communications Officer**
**(from May 20, 2008**
**until November 25, 2009)**

| | Amount for 2009[4] | | Amount for 2008 | |
|---|---|---|---|---|
| | due | paid | due | paid |
| Fixed salary | 282,213 | 282,213 | 171,110* | 171,110* |
| Variable salary | Not available[2] | 66,583 | 66,583 | 4,113 |
| Exceptional salary | - | - | - | - |
| Directors' fees | Not applicable | Not applicable | Not applicable | Non applicable |
| Benefits in kind[6] | 13,903 | 13,903 | 7,543 | 7,543 |
| **TOTAL (IN EUROS)** | **296,116** | **362,699** | **245,236** | **182,766** |

** For functions exercised from May 20, 2008 to December 31, 2008.*

*(1) January 1, 2009 to November 23, 2009.*
*(2) Compensation owed for 2009 does not include the variable portion due for 2009, which had not been determined at the date of publication of the Document de Référence.*
*(3) Company car and benefits in kind in the form of energy.*
*(4) January 1, 2009 to November 25, 2009.*
*(5) Company car.*
*(6) Principally company car, energy, and other benefits in kind associated with IEG status.*

**Yann Laroche, Chief Human Resources and Communications Officer (until May 20, 2008)**

| | Amount for 2009 | | Amount for 2008 | |
|---|---|---|---|---|
| | due | paid | due | paid |
| Fixed salary | Not applicable | Not applicable | 177,450* | 177,450* |
| Variable salary | Not applicable | Not applicable | - | 167,215 |
| Exceptional salary | Not applicable | Not applicable | - | - |
| Directors' fees | Not applicable | Not applicable | Not applicable | Not applicable |
| Benefits in kind(1) | Not applicable | Not applicable | 16,184 | 16,184 |
| **TOTAL (IN EUROS)** | **NOT APPLICABLE** | **NOT APPLICABLE** | **193,634** | **360,849** |

* *For the exercise of chief officer functions held from January 1, 2008 to May 20, 2008.*

**Jean-Louis Mathias, Chief Operating Officer, Integration and Deregulated Operations in France (until November 25, 2009)**

| | Amount for 2009(2) | | Amount for 2008 | |
|---|---|---|---|---|
| | due | paid | due | paid |
| Fixed salary | 493,163 | 493,163 | 519,000 | 519,000 |
| Variable salary | Not available(3) | 226,773 | 226,773 | 192,029 |
| Exceptional salary | - | - | - | - |
| Directors' fees | Not applicable | Not applicable | Not applicable | Not applicable |
| Benefits in kind(1) | 33,282 | 33,282 | 36,064 | 36,064 |
| **TOTAL (IN EUROS)** | **526,445** | **753,218** | **781,837** | **747,093** |

No options to subscribe or purchase shares were granted or exercised for the benefit of chief officers during fiscal year 2009. No performance shares were granted or exercised during the fiscal year 2009.

The Chairman of the Board is not entitled to attendance fees, and the directors representing the State as well as those representing the employees carry out their mandate for free pursuant to law n° 83-675 of July 26, 1983 concerning the democratization of the public sector.

Furthermore, Mr Henri Proglio does not benefit from a specific pension scheme from EDF and did not receive any arrival bonus and will not benefit from a severance indemnity.

# Table 3 of the AMF recommendations

**TABLE RELATING TO ATTENDANCE FEES**

The table below shows the amount of the fees paid in 2008 and 2009 to the directors.

It is specified that the amounts paid for a financial year relate to amounts due under the second half of the year T-1 and the first half of the year T.

**Directors' fees paid to each Board Member**

| | 2009 | 2008 |
|---|---|---|
| Frank E. Dangeard | 66,250 | 39,750 |
| Daniel Foundoulis | 44,750 | 36,750 |
| Pierre Gadonneix | - | - |
| Bruno Lafont(4) | 35,250 | 2,000 |
| Claude Moreau | 42,750 | 31,750 |
| Henri Proglio(5) | 34,000 | 22,000 |
| Louis Schweitzer(6) | - | 16,000 |
| **TOTAL (IN EUROS)** | **223,000** | **148,250** |

*(1) Principally company car, energy, and other benefits in kind associated with IEG status.*
*(2) January 1, 2009 to November 25, 2009.*
*(3) Due to the procedure applicable, components of variable salary for 2009 had not been determined at the date of publication of the Document de Référence.*
*(4) Appointed by the Shareholders' Meeting of May 20, 2008 to replace L. Schweitzer.*
*(5) Until his appointment as Chairman of the Board of Directors.*
*(6) Resigned on May 10, 2008.*

The increase in directors' fees between 2008 and 2009 results from the higher number of meetings held by the Board in the second half of 2008 (12 compared to the usual average of 5 or 6) in connection with the acquisitions of British Energy and the nuclear assets of Constellation Energy Group.

In compliance with the law and regulation, the Chairman of the Board of directors receives no director's fees, and directors representing the Government and employee representative directors also receive no directors' fees for their services as directors. The Board of Directors submits the amount of directors' fees to the General Shareholders' Meeting for approval. Directors' fees are allocated according to attendance at Board and Committees meetings.

The fifth resolution that will be submitted to the vote of the Shareholders' General Meeting of May 18, 2010 provides for the allocation of additional attendance fees to the Board of Directors in the amount of €2,250 for the year 2009.

## 15.2 Provisions for pensions, retirement fees, and other benefits

Directors and Comex members do not benefit from a specific retirement system.

## 15.3 Share ownership by directors and Chief Officers

Following the Company's initial public offering on the stock exchange, some of EDF's directors and chief officers became shareholders of the Company. At the time of the present Document de Référence, the number of EDF shares held by each director and chief officer, as well as their holding method (directly or through a company mutual fund (FCPE)), were as follows:

### SHARES IN THE COMPANY HELD BY COMPANY DIRECTORS AND CHIEF OFFICERS AS OF DECEMBER 31, 2009

The directors who hold EDF shares as of December 31, 2009 are the following:

| | Number of shares in EDF |
|---|---|
| **Henri PROGLIO** (shares held directly) | 51 |
| **Christine CHABAUTY** (shares held through an employee investment fund – FCPE) | 131 |
| **Philippe CROUZET** (shares held directly) | 200 |
| **Mireille FAUGÈRE** (shares held directly) | 106 |
| **Alexandre GRILLAT** (shares held through an employee investment fund – FCPE) | 583 |
| **Bruno LAFONT** (shares held directly) | 150 |
| **Philippe MAISSA** (shares held directly) | 39 |
| **Pierre MARIANI** (share held directly) | 1 |
| **Philippe PESTEIL** (shares held through an employee investment fund – FCPE) | 467 |
| **Maxime VILLOTA** (shares held through an employee investment fund – FCPE) | 24 |

Messrs Abadie, Bezard, d'Escatha, Jay, Josse, Rignac, Sellal and Van de Maele hold no shares in EDF at December 31, 2009.

# 15.4 Stock options for subscription of new shares and/or purchase of existing shares

None.

# 15.5 Agreements involving members of the Board of Directors

## 15.5.1 Information relating to agreements involving members of the Board of Directors

Until November 20, 2004, EDF was an EPIC (*établissement public à caractère industriel et commercial*) and the provisions of the French Commercial Code relating to agreements involving members of the Board of Directors were not applicable.

Since the transformation of EDF into a French *société anonyme* on November 20, 2004, the provisions of Article L. 225-38 of the French Commercial Code relating to such agreements apply to EDF.

## 15.5.2 Statutory auditors' special report on agreements involving members of the Board of Directors for the financial year ended December 31, 2009

*This is a free translation into English of the statutory auditors' report on regulated agreements and commitments that is issued in French and is provided solely for the convenience of English speaking readers. This report on regulated agreements and commitments should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France. It should be understood that the agreements reported on are only those provided by the French Commercial Code and that the report does not apply to those related party transactions described in IAS 24 or other equivalent accounting standards.*

**ÉLECTRICITÉ DE FRANCE S.A.**

Registered office: 22 – 30, avenue de Wagram – 75008 Paris

### STATUTORY AUDITORS' REPORT ON REGULATED AGREEMENTS AND COMMITMENTS

Year ended December 31, 2009

To the Shareholders,

In our capacity as statutory auditors of your company, we hereby present to you our report on regulated agreements and commitments.

We are not required to ascertain whether any other agreements or commitments exist but to inform you, on the basis of the information provided to us, of the terms and conditions of the agreements and commitments of which we were notified. It is not our role to determine whether they are beneficial or appropriate. It is your responsibility, under the terms of article R. 225-31 of the French Commercial Code ("Code de commerce"), to evaluate the benefits arising from these agreements and commitments prior to their approval.

**ABSENCE OF NOTIFICATION OF ANY AGREEMENTS OR COMMITMENTS**

We hereby inform you that we have not had been advised of any agreements or commitments entered into in 2009 and mentioned in article L. 225-38 of the French Commercial Code.

## AGREEMENTS AND COMMITMENTS AUTHORIZED DURING PREVIOUS YEARS AND HAVING CONTINUING EFFECT DURING THE YEAR

In addition, pursuant to the French Commercial Code, we have been advised that the following agreements and commitments authorized in previous years have had continuing effect during 2009.

**• Sale of EDF shares reserved for current and retired employees of EDF Group entities**

Following the sale by the French State at the end of 2007 of a portion of its interest held in EDF's share capital via an accelerated private placement with institutional investors, the French State carried out an offering of EDF shares reserved for current and retired employees of EDF Group entities in September 2008.

As part of this offering of shares, a memorandum of agreement was entered into on October 23, 2008 between EDF, the French State and BNP Paribas Securities Services, describing the terms and conditions relating to payment, allocation of free shares and collection of unpaid amounts due in respect of the purchase of EDF shares, when necessary.

Upon conclusion of the share offering, 3,266,541 shares were delivered to the various subscribers on October 30, 2008. In connection therewith, your Company paid consideration of €137 million in 2008 corresponding to the first payment installment owed by the subscribers and of €32 million corresponding to the second installment. Payments to be received by the French State are scheduled until October 2011.

**• Public service contract**

On October 24, 2005, the French State and Électricité de France S.A. signed a Public service contract whose purpose is to form the framework for the Company's public service mission and duties. This contract sets out the commitments undertaken by the Company over the period 2005-2006-2007 and defines the financial compensation payable for public service obligations, in particular the principles set for the calculation of and the change in electricity sales tariffs. In the absence of a new agreement, the performance of certain provisions of this contract was continued in 2009.

**• Agreement between EDF and AREVA on the back-end cycle of nuclear fuel**

On December 19, 2008, EDF and AREVA signed a long-term industrial cooperation framework agreement covering the following services:

- evacuation of all EDF spent fuel;
- technical and financial transportation conditions;
- processing and recycling of spent fuel over the period 2008-2012;
- payment of a balancing cash adjustment in respect of the recovery and packaging of old waste and of the definitive shut-down and decommissioning of the La Hague facilities for €2.3 billion based on economic conditions existing as of December 31, 2007.

The schedule of payments has been agreed upon by the two companies on July 6, 2009, and, after payment of the second installment of €605 million excluding taxes on July 27, 2009, the remaining balance due by your Company amounts to €1,478 million, including taxes, as of December 31, 2009.

Negotiations between EDF and AREVA relating to the other services mentioned above continued until February 5, 2010, when agreement was reached on the principles for application of the framework agreement. These principles should be implemented in the operating contract for 2008-2012 shortly.

**• Agreements with the AREVA Group**

Your Company entered into three agreements with the AREVA Group in 2007 with respect to the following services:

- construction of the nuclear boiler for the Flamanville 3 EPR nuclear plant;
- maintenance and servicing of boilers as part of the third ten-year inspection of the 900MW-type nuclear plants in France;
- advance booking of forged parts for EPR reactors constructed abroad.

Total consideration for these agreements amounted to €764 million (of which €182 million recorded in 2009), €116 million (of which €11 million recorded in 2009) and €212 million, including an optional €106 million (of which €29 million recorded in 2009).

**• Non-interest bearing current account advance with Lake Acquisitions Ltd**

As part of the acquisition on September 25, 2008 of approximately 26.5% of the shares issued by British Energy Group, by Lake Acquisitions Ltd, a subsidiary in which your Company indirectly owns a 100% interest, a loan of sterling £2,123 million (or €2,680 million) was granted by your Company to Lake Acquisition Ltd on September 29, 2008, modified by a side agreement dated February 15, 2009. The current account agreement signed for this purpose between the two companies did not include any clause providing for EDF to receive interest on this loan. The advance has been reimbursed on June 30, 2009.

We performed the procedures we considered necessary in accordance with professional guidance issued by the National Institute of Auditors ("Compagnie Nationale des Commissaires aux Comptes") relating to this engagement. Our work consisted in verifying that the information provided to us is in agreement with the underlying documentation from which it was extracted.

Paris La Défense and Neuilly-sur-Seine, February 10, 2010

The statutory auditors

| **KPMG Audit**<br>Département de KPMG S.A. | | **Deloitte & Associés** | |
|---|---|---|---|
| Jean-Luc Decornoy | Michel Piette | Alain Pons | Tristan Guerlain |

# 16 Functioning of the administration and management bodies



## 16.1 Powers of the Board of Directors

Pursuant to Article L. 225-35 of the French Commercial Code, the Board of Directors determines the orientation of the activities of the Company and oversees their implementation. Subject to powers expressly attributed by law to the Shareholders' Meetings and within the limit of the corporate purpose of the Company, the Board may discuss any question relating to the functioning of the Company and acts, through its deliberations, on any such issue.

Moreover, in accordance with Article 7 of the French law of July 26, 1983 relating to the democratization of the public sector, the Board of Directors deliberates, on all the strategic, economic, financial and technological trends of the Company and the Group and on the matters which the law expressly attributed or reserved to it.

Pursuant to its rules of procedure, the Board of Directors shall among other things, be referred to with respect to:

- operations of external or organic growth or disposal which represent a financial exposure for the Company over €200 million. This threshold is lowered to €50 million for acquisition operations that are not in the strategic directions of the Company;
- property transactions exeeceding €200 million;
- certain financial transactions, from the moment that their amount exceeds a value determined each year by a special decision of the Board; in 2009, the Board has set:
  - to €500 million, the total amount of the envelope allowed for the sureties, endorsements or guarantees. In addition, the Chairman and Chief Executive Officer reports to the Board on any transaction of this nature which individual amount exceeds €100 million, made on behalf of the Company or by a company controlled by the Company;
  - to €5 billion, the individual unit amount of certain financial transactions;
- contracts (supplies, works or services with or without financial commitment) whose amount, including, where applicable, their successive amendments made during the same year, equals or exceeds €200 million, or is comprised between €100 and €200 million if these markets represent a new strategic direction or a new trade of the Group;
- long-term energy sales and purchases, $CO_2$ emission credits and quotas by the Company, or a company it controls exclusively, on annual volume or amounts exceeding:
  - 10 TWh for electricity;

- 20 TWh for gas (long-term energy sales and purchase contracts above 5 TWh and below 20 TWh are also the subject of detailed information at the meeting of the Board of Directors which follows their signature);
- €250 million for coal and carbon dioxide.

• operations of the nuclear fuel cycle: in particular, strategies relating to upstream and downstream operations of the nuclear fuel cycle;
• operations of transfer of obligations relating to the decommissioning or downstream of the nuclear fuel cycle.

In addition, the Board must be seized for transactions relating to the funding of nuclear commitments.

## 16.2 Board of Directors activity during the fiscal year 2009

The Board of Directors meets as often as the interest of the company requires, upon notification by the Chairman, in accordance with applicable legislative and statutory provisions.

The rules of procedure provide that all directors participating in the meeting of the Board of Directors by any telecommunication means which allow their identification and assure their effective participation, in accordance with applicable legal provisions, are deemed present for the purposes of calculating the quorum and the majority.

In 2009, the Board of Directors has reviewed and authorized, in addition to numerous files related to the activity of the Company, major issues such as:

• the agreements with the Centrica group involving in particular the acquisition of a minority interest of 20% in British Energy by Centrica and cooperation in the new nuclear in the United Kingdom; the acquisition by EDF from Centrica of 100% of the shares of the company Segebel, which owns 51% of the company SPE (Belgium);
• the beginning of the process intended to lead to the construction of an EPR-type reactor on the Penly site (76);
• the transfer of shares still held by EDF in the SNET, in the context of a transaction between E.ON, EDF and EnBW concerning generation capacities;
• the litigation with the European Commission in relation to long-term contracts;
• the amendments made the industrial partnership contract between EDF and the Exeltium consortium signed on July 31, 2008;
• the positioning of EDF for a consortium offer on an EPR project in the United Arab Emirates.

In addition, the Board of Directors examined:

• ongoing projects in the nuclear energy sector: the steps in the process of acquiring 49.99% of the nuclear generation and operation activities of Constellation Energy (United States) and the progress of the EPR construction project at Flamanville;
• the draft agreement between EDF and Gazprom or the launch of the process of examining development options for the ownership of EDF's electricity supply networks in the United Kingdom;
• the Group's strategic frame of reference as defined in 2007 in order to take into account various major events that had since occurred: the realization of several acquisition operations (or projects) (British Energy, 49.99% of the nuclear generation and operation activities of the Constellation Energy Group, Segebel/SPE), the effects of the financial crisis on the Group and the development of the institutional and regulatory context (the climate and energy package agreed by the European authorities, legislative texts resulting from the Grenelle Environment Round Table, the Champsaur Commission report on the organization of the electricity market in France).

In 2009, the Board of Directors met 12 times. The average directors' attendance rate to these meetings is 88.9%.

## 16.3 Evaluation of the Board of Directors

In accordance with principles arising from the AFEP–MEDEF code of corporate governance of December 2008, which advocates carrying out an evaluation of the Board, the Board's rules specify that the ethics Committee *"delivers each year a report on the evolution of Board's functioning* (...) *and suggests questions to be discussed"*.

EDF has also decided to give, every three years, to an external firm the making of this evaluation.

The evaluation of the Board of Directors for 2009 was carried out using a questionnaire, examined beforehand by the ethics Committee then sent to all directors on October 12, 2009. The answers were analyzed anonymously by the General Secretary of the Board of Directors and led to the creation of a summarizing document examined by the ethics Committee and sent to the Board of the directors. The report on the evaluation of the Board of Directors for 2009 conveyed a very positive evolution over the past five years. A very large majority of directors consider that the functioning of the Board of Directors fulfills the corporate governance best practice criteria.

# 16.4 Specialized Committees within the Board of Directors

In its functions, the Board of Directors decided to set up specialized Committees within the Board, whose functions are to prepare the case files in advance before they are presented in the whole Committee. These Committees are the following: an audit Committee, a nuclear commitments monitoring Committee (CSEN), a strategy Committee, an ethics Committee and an appointments and remunerations Committee. The Chairman of the French State general economic and financial control mission towards EDF is invited to the meetings of these Committees.

The chairmen of such Committees are:

- audit Committee: Mr. Pierre Mariani;
- CSEN: Mr. Philippe Crouzet;
- strategy Committee: at the date of filing of this *Document de Référence*, the appointment of the Chairman of this Committee has not taken place yet;
- ethics Committee: Ms Mireille Faugère;
- appointments and remunerations Committee: Mr. Bruno Lafont.

## 16.4.1 Audit Committee

Until November 22, 2009 included, the audit Committee was chaired by Mr. Dangeard, a director appointed by the Shareholders' Meeting and external to the EDF group. The other members of the Committee were Mr. Bézard and Mr. d'Escatha, directors representing the French State, and Mr. Chorin and Mr. Villota, directors appointed by the employees.

Since November 23, 2009, the audit Committee is comprised of Mr Mariani, a director appointed by the Shareholders' Meeting and external to the Group, Mr. Bézard and Mr. d'Escatha, directors representing the French State, and Mr Grillat, Mr Pesteil and Mr Villota, directors appointed by the employees. Mr Mariani was appointed Chairman of the Committee by the Board of Directors at its meeting of January 21, 2010 upon proposal of the said Committee.

The Committee regularly hears the auditors, the General and Financial Division, the Audit executive and the Risks Control Group executive. The Committee reviews and gives its opinion, before submission to the Board on:

- the Company's financial situation;
- the medium-term plan and the budget;
- the draft financial reports prepared by the financial Division (the annual financial statements of the Company, the consolidated annual financial statements and the management report of the Group);
- the monitoring of the Company's risks (in particular, the Group's risk management policy is regularly examined by this Committee which reviews every semester the Group's mapping of the consolidated risk and risk control methods);
- the audit and internal control: organization, deployment and evaluation of the system of internal controls, biannual audit programs, main findings and corrective actions arising from them, monitoring their implementation, as well as the draft annual report of the Chairman of the Board of Directors on corporate governance, internal control procedures and risk management;
- the policies relating to insurance;
- the choice of the auditors and the fees paid to them;
- the financial aspects of external or disposal operations which are particularly significant.

The audit Committee met seven times in 2009, including a meeting extended to all the members of the Board of Directors, concerning the 2009 budget and the 2009-2011 Medium-Term Plan, and a joint meeting with the Strategy Committee, also extended to all the members of the Board in order to evaluate the project for the new organization of the French electricity market resulting from the Champsaur Commission's report. The directors' average attendance rate is 82.9%.

During 2009, in addition to those subjects traditionally addressed, such as the review of the half-yearly and annual accounts, risk-mapping and audits, this Committee reviewed the impact of the economic and financial crisis, the markets' perception of the EDF group, the counterparty risk policy, the insurance policy, the French financial balance, and the financial issues related to the development of nuclear energy in the target countries and the extension of the operating life of the French nuclear fleet. Furthermore, it heard the report, by the auditor missioned to that effect, of the external audit of the realization of the Group's internal control policy.

## 16.4.2 Nuclear commitments monitoring Committee (CSEN)

Until November 22, 2009 included, the CSEN was chaired by Mr. Dangeard, director appointed by the Shareholders' Meeting and external to the Group. The other members were Mr. Abadie and Mr. d'Escatha, directors representing the French State and Mr. Chorin and Mr. Villota, directors appointed by the employees.

Since November 23, 2009, this Committee is comprised of Mr Crouzet, director appointed by the Shareholders' Meeting and external to the Group, Mr Abadie and Mr. d'Escatha, directors representing the French State and Mr. Pesteil and Mr. Villota, directors appointed by the employees. Mr Crouzet was appointed Chairman of the Committee by the Board of Directors at its meeting of February 10, 2010, upon proposal of the said Committee.

This Committee's mission is to monitor the evolution of nuclear provisions, give its opinion concerning dedicated assets' management, the ratio between assets and liabilities and the strategic allowance, and to examine the compliance of EDF's dedicated asset management under the dedicated assets constitution and management policy. In this regard, it can rely on the works of the nuclear commitment financial expertise Committee (CEFEN) which is composed of five independent experts and which assists the company and its governance bodies on these questions.

In 2009, the Committee met three times. The directors' average attendance rate is 100%.

During 2009, this Committee reviewed in particular the CEFEN's summary of work. It monitored the impact of the economic and financial crisis on the management of the dedicated assets portfolio, reviewed the scenarii of resumption of the cash allocations to dedicated assets, suspended in September 2008 due to the economic and financial crisis, studied scenarii for asset contributions to the dedicated assets portfolio. It also considered the question of the best strategic allocations of shares – bonds in the current context.

## 16.4.3 Strategy Committee

Until November 22, 2009 included, the strategy Committee was chaired by Mr. Proglio, a director appointed by the Shareholders' Meeting and external to the Group. The Committee's other members were Mr. Abadie, Mr. Bézard, and Mr. Sellal, directors representing the French state, and Mrs. Daguerre, Mr. Grillat and Mr. Pesteil, directors appointed by the employees.

Since November 23, 2009, this Committee is comprised of Mr Henri Proglio, Chairman and CEO, Mr Jay, director appointed by the Shareholders' Meeting and external to the Group, Mr. Abadie, Mr. Bézard and Mr. Sellal, directors representing the French State and Mr. Grillat, Mr. Pesteil and Mr. Rignac, directors appointed by the employees. At the date of filing of this *Document de Référence*, the appointment of the Chairman of this Committee has not taken place yet.

The Committee gives its opinion concerning the Company's main strategic guidelines, in particular concerning the strategic referential, the industrial and trade policy, the Public service contract, strategic agreements, alliances and partnerships, the research and development policy, organic and external growth or transfer projects required to be authorized by the Board of Directors.

In 2009, the strategy Committee met 3 times, including one in conjunction with the ethics Committee in order to review the sustainable development policy of EDF, and another one with the audit Committee, extended to the whole Board, which focused on the project of the French electricity market's new organization. It also reviewed the upstream and downstream strategies of the nuclear fuel cycle. The directors' average attendance rate is of 81%.

## 16.4.4 Ethics Committee

Until November 22, 2009, the ethics Committee was chaired by Mr. Aurengo, a director representing the French State. The other members were Mr. Foundoulis and Mr. Moreau, directors appointed by the Shareholders' Meeting, and Mr. Chorin, Mr. Pesteil and Mr. Rignac, directors appointed by the employees.

Since November 23, 2009, this Committee is comprised of Mrs. Faugère, director appointed by the Shareholders' Meeting and external to the Group, Mr Van de Maele, director representing the French State and Mrs Chabauty, Mr. Maissa and Mr. Pesteil, directors appointed by the employees. On December 8, 2009, Mr. Grillat was also appointed member of this Committee. Mrs. Faugère was appointed Chairman of the Committee by the Board of Directors at its meeting of February 10, 2010, upon proposal of the said Committee.

The Committee ensures that ethical considerations are reflected in the work of the Board of Directors and that the management of EDF are taken into consideration. It examines: the annual report excluding financial statements (activity and sustainable development reports), the activity report of the Ethics advisor; as well as the reports of the Mediator, of the General Inspector for the nuclear safety and the radiation protection, of the Inspector for hydraulic safety and of the General Inspector for the governance of the regulated sector.

Moreover, the ethics Committee prepares every year a report regarding the evolution of the Board of Directors' functioning and the implementation of its internal rules, and suggests matters to be discussed.

In 2009, the Committee met 8 times. The directors' average attendance rate is 100%.

During 2009, this Committee examined in particular the Group Human Resources guiding plan for the 2009-2011 period, the global social agreement concerning the Group's Social Responsibility, the health at work policy, the implentation of the "Swine Flu Pandemic" plan, the updating of skills in the field of nuclear energy, the communication policy and the results of the evaluation of the Board of Directors for 2008 and 2009.

Furthermore, this Committee made two trips in 2009: one to Laos with the EDF Medical Council in the context of the hydroelectric develoment on the Nam Theun river, and one to the nuclear power plant at Nogent-sur-Seine (77) in the context of continuing the visits organized annually since 2004 in order to evaluate the issues relating to EDF's nuclear subcontracting policy.

## 16.4.5 Appointments and remunerations Committee

Until November 22, 2009 included, the Committee was chaired by Mr. Bruno Lafont, a director appointed by the Shareholders' Meeting and external to the Group. The other members of the Committee were Mr. Dangeard, a director appointed by the Shareholders' Meeting and external to the Group and Mr. Bézard, a director representing the French State.

Since November 23, 2009, the appointments and remunerations Committee is comprised of Mr. Jay and Mr. Lafont, directors appointed by the Shareholders' Meeting and externals to the Group, and Mr. Bézard, director representing the French State. Mr. Lafont was appointed Chairman of the Committee by the Board of Directors at its meeting of January 21, 2010, upon proposal of the said Committee.

The Committee delivers to the Board of Directors proposals concerning the appointment of directors by the Shareholders' Meeting. It addresses, for approval, to the Minister of Economy and to the Minister in charge of the Energy its opinion on the remuneration of the Chairman and Chief Executive Officer (CEO) on the salary, the variable part (including objectives and criteria for its assessment of the results obtained by the CEO under the set objectives) and the peripheral remunerations of the CEO. It also sends a notice to the Board for deliberation and determination of those remunerations.

It discusses the salaries of Chief Operating Officers and issues an opinion on the proposed remuneration that the CEO submitted on the salary, the variable part (including objectives and criteria for its assessment of the results obtained by the CEO under the set objectives) and the peripheral remunerations of each Chief Operating Officer. It sends its propositions and its opinion, for approval, to the Minister of Economy and to the Minister in charge of the Energy and also communicates it to the Board. The Board of Directors discusses and sets the salary, the goals and peripheral remuneration of the Chief Operating Officer.

It also conveys its opinion to the Board of Directors regarding the methods for establishing the remuneration of the Company Senior Management (fixed and variable portions, method of calculation and indexation), as well as the amount and the allocation methods of the directors' fees. It assures the existence of replacement lists for the members of the Executive Committee. Elements relating to the compensation of corporate officers are listed in chapter 15.1 of this *Document de Référence*.

In 2009, the appointments and remunerations Committee met five times. The directors' average attendance rate is 86.7%.

During 2009, the Committee notably reviewed the 2008 bonus of the Chairman and CEO and the Chief Operating Officers, issued an opinion on their salary for 2009 and established the criteria for the calculation of the 2009 bonuses. It also studied the profiles of the six directors elected by the Shareholders' Meeting of November 5, 2009.

### 16.4.6 Information and training of directors

The Chairman and Chief Executive Officer regularly informs the members of the Board of Directors of the major facts and significant events of the Company since the date of the previous Board meeting.

The General Secretariat of the Board of Directors also communicates to the directors certain information, which they may supplement by meeting with key leaders of the Group. They express their request to the Board's Secretary.

In addition, the Secretariat of the Board of Directors organizes information meetings on complex or high-stake issues or upon request by the directors, as well as the trainings which the directors wish to benefit.

### 16.4.7 Corporate governance code

After being acknowledged with the AFEP-MEDEF recommendations from October 2008, which were included in the communication of the Council of Ministers on October 7, 2008, on the compensation of corporate officers, and upon proposal by the remuneration Committee, the Board of Directors of December 17, 2008, expressed his agreement on these recommendations. The Board considered that these recommendations are included in EDF's corporate governance approach, which has been implemented for a long time and noticed that the recommendations applicable to the company had already been implemented by it.

Subject to the specific laws and regulations applicable to it, these recommendations will form part of the corporate governance code to which the Company will refer, pursuant to Article L. 225-37 of the French Commercial Code.

## 16.5 EDF ethical approach

EDF's ethical approach, presented for the first time at the meeting of the Board of Directors of March 26, 2003 and coordinated by the Head of Ethics, consists of the distribution of and adherence to a Code of Ethics centered on five values: respect for individuals, respect for the environment, performance, solidarity and integrity.

The code details the ethical commitments of the Group with respect to interested parties (principles of collective action) as well as an individual code of conduct (Ethics Guide). These values underlie the social and environmental commitments of the company, particularly the UN Global Pact, Agenda 21 and the EDF group Social Responsibility Agreement signed on January 24, 2005. The approach is implemented by management in all parts of the Group.

The Code of Ethics is available on EDF website.

A whistleblower procedure was implemented in January 2004, which makes it possible to question the ethics advisor on any question, warning or complaint of an ethical nature. This system is open not only to employees, but also to external partners and customers.

## 16.6 Stock exchange ethics charter

Following the Company's listing on the stock exchange in November 2005, EDF adopted early 2006 an ethics charter aimed at imposing the respect of the applicable rules and principles as well as the recommendations made by the stock market authorities in the area of risk management related to the holding, disclosure, or possible using of privileged information.

To that purpose, the EDF group has in particular decided to set up abstention periods (black-out) during which insider persons according to article L465-1 of the Financial and Monetary Code cannot buy, sell or conclude operations on EDF's shares.

Black out periods are short, foreseeable, and significant non-public information about the EDF group can circulate within the Group during that time. Those periods take place:

- between the first day of each quarter and the day of the press release publication related to the annual or half-yearly financial statements or EDF quarterly sales (included); and/or
- between the day when the person gets to know the inside information and the day when this information is made known to the public.

# 16.7 Internal control

## 16.7.1 Chairman of the Board of Directors' report

Pursuant to article L. 225-37 of the French Commercial Code, the Chairman of EDF's Board of Directors is required to deliver a special report, enclosed to the management report of the Board, regarding the status of the preparation and organization of the work of the Board of Directors, as well as the status of the internal control procedures implemented by the Company.

This report is reproduced in Appendix A.

## 16.7.2 Independent auditors' report, prepared in accordance with article L. 225-235 of the French Commercial Code, on the report prepared by the Chairman of the Board of EDF, regarding the internal control procedures relating to the preparation and processing of accounting and financial information

This report is reproduced in Appendix B.

# 16.8 Compliance with the corporate governance principles in force in France

Subject to what is described below, EDF adheres to the AFEP-MEDEF code of corporate governance of December 2008 and in particular to the key corporate governance principles relating to:

- responsibility and loyalty of the directors and managers;
- independence of the Board;
- transparency and diffusion of information;
- respect of the shareholders' rights.

In this specific legal framework, EDF is committed to implementing the recommendations set out in this report, in particular by having the Board to adopt rules of procedure setting the Main Principles for its functioning, how it should operate (see section 16.1 ("Powers of the Board of Directors")) and the creation of specialized committees.

Given the specific legal rules that apply to the composition of the Board of Directors (see section 14.1.1 ("Composition of the Board of Directors")), EDF does not completely comply to the AFEP-MEDEF report's recommendations as regard to the number of independent directors within the Board. According to those specific rules, the Board of Directors includes, out of 18 members, 12 directors (including 6 directors representing the French State and 6 directors representing the employees or the shareholders employees) that cannot correspond to the independence criteria as set out in the AFEP-MEDEF report.

After having considered the AFEP-MEDEF recommendations from October 2008 through the communication of the Council of Ministers on October 7, 2008 on the remuneration of leader officers of companies and the proposal of the remuneration Committee, the Board of Directors of EDF met on December 17, 2008 to approve these recommendations.

# Employees/Human resources

17



The developments within EDF in the area of human resources continued in 2009; recruitment and updating of skills in the context of a revival of investments in France, implementation of the plans negociated within the framework of pension reform (additional regime for the Group, contingency system, etc.).

In spring 2009, social tensions arose within the EDF group in France, particularly at several nuclear power plants, in a nation context of demands relating to purchasing power. These movements caused a loss in generation of approximantely 17 TWh. The social dialogue continued, and numerous agreements were signed, at several levels: operational divisions in France, subsidiaries and Group. In particular, attention should be drawn to the renewal in 2009 of the *Responsabilité Sociale d'Entreprise* agreement (see section 17.6.2.3 ("Social dialogue and representation of Group employees") hereinafter).

In 2009, EDF defined its Human Resources ambitions for the first time at Group level.

These ambitions, presented to the Board of Directors on June 24, 2009, include three priorities:

- to develop our skills, a major issue for the coming years;
- to encourage employees' long-term commitment, paying constant attention to health and safety, the quality of life at work and individual recognition;
- to introduce a greater level of diversity, which will increase the levels of performance, attraction and retention of skills, and strengthen our shared culture.

## 17.1 Development of skills

### 17.1.1 Group workforce

The consolidated workforce of the EDF group totaled 169,139 persons as of December 31, 2009, with 105,129 within EDF, ERDF and RTE and 64,010 within its other subsidiaries and shareholdings in France and abroad which are included in the scope of consolidation.

The table below shows the change in the workforce for the Group's shareholdings and subsidiaries, weighted by the financial consolidation percentage over the last three financial years:

| | As of December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2007 | | 2008 | | 2009 | |
| | Number | % | Number | % | Number | % |
| EDF, ERDF and RTE * | 105,322 | 66 | 104,929 | 65 | 105,129 | 62 |
| Subsidiaries and shareholdings | 53,318 | 34 | 55,984 | 35 | 64,010 | 38 |
| **TOTAL** | **158,640** | **100** | **160,913** | **100** | **169,139** | **100** |

** The workforce of EDF, ERDF and RTE include employees not employed under the IEG status in EDF, ERDF and RTE. ERDF's payroll includes, in addition to its own employees, those whose services are shared, who can be broken down into 100% electricity employees (28,853), and a proportion of employees seconded to mixed gas and electricity activities (7,899) with an electricity/gas distribution key of 75/25.*

## EDF, ERDF and RTE workforce

For some 20 years, the workforce of EDF, ERDF and RTE have decreased each year (except in 2000, when it increased slightly, due to the creation of jobs, following the implementation of a reduction in working hours agreement).

However, in the context of an increase in the number of retirements and the development of the Group's activities in France and abroad, EDF plans to recruit more than 3,000 people per year in France over the next five years in the areas requiring skills renewal and development. This movement is already underway and resulted in 3,500 recruitments in 2008 for EDF SA, ERDF and RTE, and 3,700 in 2009.

The table below shows the breakdown of employees of EDF, ERDF and RTE between the different Divisions/Subsidiaries as of December 31, 2009:

| | Employees | | |
|---|---|---|---|
| | 2007 | 2008 | 2009 |
| **Regulated sector:** | | | |
| ERDF | 36,448 | 35,156 | 34,781 |
| RTE * | 8,550 | 8,782 | 8,909 |
| **Deregulated sector** | | | |
| Generation and engineering | 35,609 | 36,109 | 33,976 |
| Sales | 12,337 | 12,226 | 11,858 |
| Headquarters ** | 8,432 | 8,713 | 11,537 |
| CDI and CDD (not employed under the IEG status) | 694 | 709 | 844 |
| Island Electricity Systems (SEI) | 3,252 | 3,234 | 3,224 |
| **TOTAL** | **105,322** | **104,929** | **105,129** |

** The workforce of RTE includes employees not employed under the IEG status.*
*** The workforce of the Headquarters includes employees of the Shared Services Division created on January 1, 2009.*

## CONSOLIDATED SUBSIDIARIES' WORKFORCE (EXCLUDING RTE AND ERDF)

The table below shows the breakdown of employees (Group's share) in the subsidiaries and shareholdings included in the scope of consolidation as of December 31, 2008:

| | Employees | | |
|---|---|---|---|
| | 2007 | 2008 | 2009 |
| Subsidiaries in France: (including Électricité de Strasbourg, Tiru, EDF EN, SOCODEI, Fahrenheit) | 3,708 | 4,599 | 5,526 |
| EDF Energy (United Kingdom – including British Energy) | 13,158 | 13,406 | 20,077 |
| EDF Trading (United Kingdom) | 426 | 563 | 822 |
| EnBW (Germany) | 9,336 | 9,445 | 9,732 |
| Edison (Italy) | 1,449 | 1,450 | 1,921 |
| Dalkia International | 16,070 | 17,822 | 17,397 |
| Other foreign subsidiaries | 9,170 | 8,699 | 8,535 |
| *Eastern Europe* | *6,818* | *6,585* | *6,491* |
| *Western and Mediterranean Europe and Africa* | *1,946* | *1,950* | *1,878* |
| *Asia Pacific* | *321* | *74* | *76* |
| *Americas* | *85* | *90* | *90* |
| **TOTAL** | **53,318** | **55,984** | **64,010** |

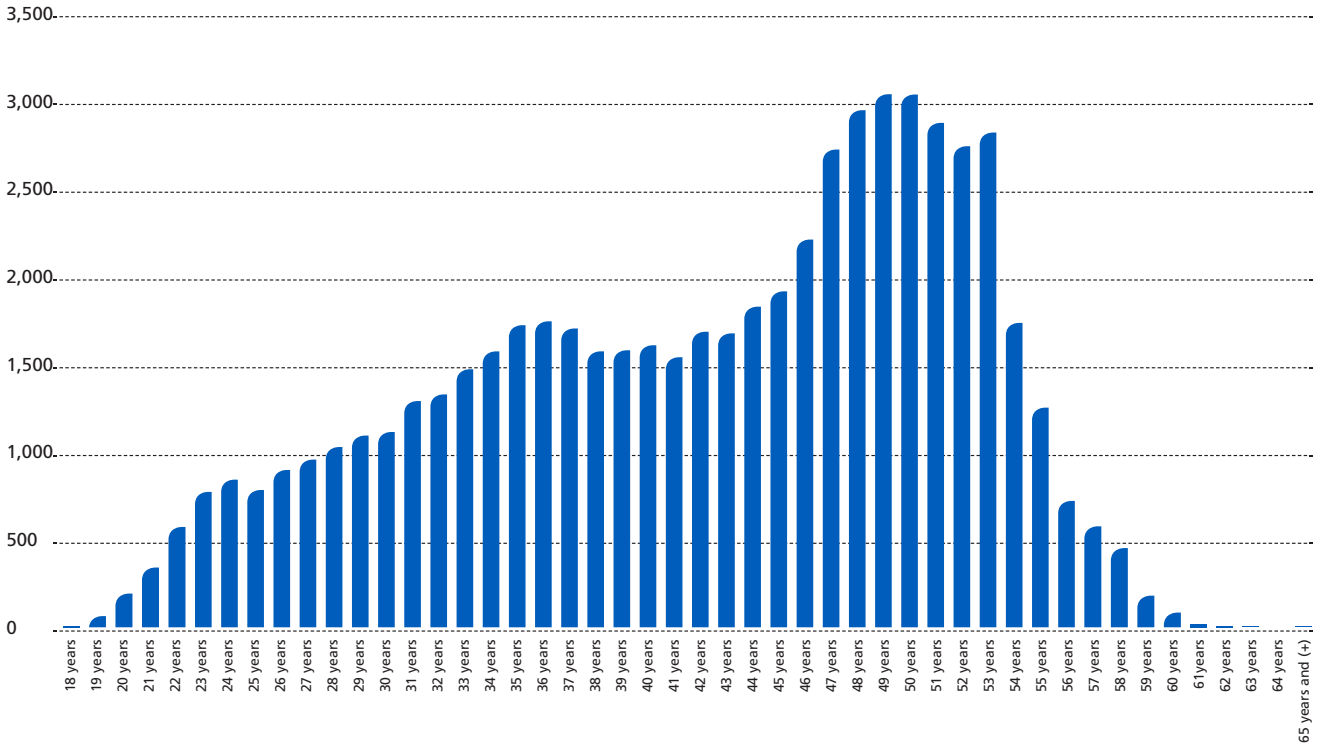
## 17.1.2 Training and mobility policy

Managing skills is an important objective for the Group, both in terms of economic performance and the regeneration of professionalism and integration.

The significant number of retirements and the Group's develoment projects necessitate the replacement of highly qualified personnel in several key areas at EDF (engineering, generation), ERDF and RTE. Indeed, due to an unbalanced age structure (more than 65% of the workforce is over 40), the operating and maintenant teams in the Production and Engineering Division in France will experience the retirement of approximately half of their workforce before 2015. EDF is taking this opportunity to adapt the number and profil of its employees and follow its program for the reorganization of professions in decline (service, central functions) around new and growing business areas.

The graphic below presents the age structure as of December 31, 2009:

**AGE STRUCTURE – STATUTORY WORKFORCE OF EDF AS OF DECEMBER 31, 2009**




The recruitment and mobility within the Group are crucial to ensure the renewal of these skills. Furthermore, the Group, which operates in a context of high-technicality jobs, has always devoted a significant budget for employees training, in order to constantly accompany career development and paths.

The table below sets forth this training effort within EDF, ERDF and RTE:

| | 2007 | 2008 | 2009 |
|---|---|---|---|
| % of the payroll engaged in training | 6.3 | 6.9 | 7.2 |
| Number of average training hours per employee | 40 | 41 | 46 |

Concerning recruiting, EDF, RTDF and RTE recruited nearly 3,700 people in 2009. In a highly competitive labor market, EDF has increased the communication of its employer brand towards young graduates and modernized its method of recruitment (websites, etc.).

To adapt their business areas and skills, and to take into account the Group's development projects, EDF and ERDF have recruited approximately 3,000 people in France per year since 2008. In the nuclear sector, the company recruits 500 engineers per year, three times more than previously.

EDF reaffirms that the transmission and renewal of skills is an absolute and in 2010 will launch an ambitious new training-skills program on a group-wide scale, which includes plans for the creation of an EDF Campus and negociation with regard to training within the Group in France, which will be extended progressively to other countries.

The Provisional Management of Jobs and Skills agreement, signed on January 29, 2010 represents the first step of this process. It aims in particular to give employees a greater visibility in relation to jobs and professions, to enable them to build a rewarding career path.

# 17.2 Equal opportunity

## Apprenticeship

The employment of young people in the context of apprenticeship aims in particular to offer young people from less privileged backgrounds in France the opportunity to start their career with the recognized assets of a diploma and professional experience. For EDF, ERDF and RTE, apprenticeship recruitment and professionalization contracts are an additional means of meeting the need for renewal of its internal skills ans those of its main industrial partners.

The EDF group is committed to providing these young people with a high-caliber accompaniment during their professional integration, mobilizing more than 3000 employees as tutors and mentors.

EDF and ERDF reached its target in favor of apprenticeship by welcoming more than 4,000 young people (through apprenticeship and professional contracts) into the company during 2009, representing more than 4% of the company workforce.

Apprenticeship concerns all of the Group's lines of business, namely generation, distribution and supply, as well as all levels of qualification, from the general or the technical sectors, including those with postgraduate education. This dynamic will be continued in 2010 and EDF France will multiply the number of apprenticeship offers leading to the vocation training qualification CAP ("*Certificat d'Aptitude Professionnelle*") by 5 starting in 2010.

If some of these youngsters in apprenticeship are meant to be hired by EDF and ERDF in order to take part in the renewal of competencies, others will be able to find an employment within its service providers also facing the renewal of competencies or in companies seeking skills acquired at EDF and ERDF.

## Seniors employees

The Group is pursuing a new dynamic concerning senior employees. At EDF, employees aged 55 and above currently represent 8% of the workforce and employees aged 50 and above represent 32% of the workforce. Negociations at EDF commenced during the last quarter of 2009.

The Group is committed to encouraging the continuation in employment of employees aged 55 and above, and improving the working conditions of senior employees. This entails in particular the improvement of the current conditions of senior employees, encouragement of career progression throughout the professional lifetime, with preparation in particular for the second half of the career, provision of easier access to training for senior employees and better preparation for the transition from the end of professional activity to retirement.

In the absence of an agreement with the trade unions, an action plan was established, presented to the General Works Council in December 2009 and will begin in 2010, in accordance with legislation (decrees of May 20, 2009).

## Diversity/Non discrimination

On June 1, 2006, EDF signed a commitment to encourage diversity and equality of opportunity within the company and to prevent discrimination. Initiatives deployed as action plans at EDF's professions senior management level are now being implemented and followed up in the context of a dedicated annual review.

EDF also signed the Diversity Charter on September 22, 2006.

EDF's policy on diversity has given rise to an awareness program for managers, heads of HR and employees on representations and stereotypes linked to diversity. The number of people trained since 2009 is one of the criteria used to calculate profit-sharing in EDF's profit-sharing agreement.

The plan for the prevention of discrimination in the workplace was the subject of cooperation with the trade unions in 2009.

On February 25, 2009, EDF signed its eighth agreement since 1989 for the professional integration of disabled persons. The company committed itself to recruit at least 4% of disabled people. 144 disabled workers have been hired in 2009 by EDF and ERDF. In addition, EDF and ERDF are leading a voluntary action to welcome young disabled people each year through apprenticeship and professional contracts (54 in 2009).

A second agreement relating to professional equality between men and women was signed on December 21, 2007. It commits signatories around six themes: sustainable change of mentalities, mixity of employment and recruitment, equality in career paths, equal opportunities in access to vocational training, taking into account the time and working conditions and the balance between the professional and private life. The signatories also pledged to eliminate the wage gap between women and men as soon as possible and no later than December 31, 2010. In 2009, equality of salaries between men and women was attained globally speaking (inequality of less than 1%).

At the end of 2006, EDF obtained the label "Equality", confirmed in 2008. Created in 2005 at the initiative of the public authorities with the trade unions, this Label is a sign of the exemplary nature of the permanent and efficient efforts of an organization of any legal structure to strive for equality and professional diversity.

Finally, since 2008, the EDF group organizes a diversity day in May each year. This event enables each of the Group's entities or subsidiaries to showcase the initiatives that it has taken to promote diversity and avoid discrimination.

# 17.3 Health and safety – quality of working life

The Group operates in a high-technology sector where there are risks. The health and safety of its employees and its outside subcontractors is therefore a major imperative for the Company.

EDF's new health and safety policy, signed by the Chairman in March 2009, takes into account developments in the professional environment, new types of work and the lengthening of careers, which have given rise to new concerns necessitating the reorientation of the policy. This new policy is the result of a broad multidisciplinary dialogue between various departments (training, experts, doctors, personnel representatives). It is in line with the Group's core value of respect for the individual.

The National Committee for Orientation and Monitoring, created in 2003, bringing together EDF's operational divisions, makes an annual review of the health and safety policy in order to ensure its implementation, to analyze the associated results indicators, check the efficiency of the provisions and suggest improvements.

Since 2008, common health and safety principles and indicators are shared by all of the Group's companies. The results are the subject of a Group Committee report.

In 2007, EDF created a "National Monitoring Organization for Quality of Life in the Workplace", thus reinforcing its ethics plan and simplifying its procedures to foster neighborhood management. The Organization has held six meetings since its implementation on June 22, 2007. It is a place for dialogue involving physicians, managers, social partners, external experts, etc. The Organization monitors working conditions, commissions studies and issues recommendations. In 2008, the Organization recommended the implementation of the EVREST ("*Évolutions et Relations en Santé au Travail*") plan, which provides the firm with a system of intersecting health/work indicators. This plan was decided upon and implemented in 2009 by the occupation health doctors on a voluntary basis. The first data will be available in 2010.

In 2009, the Organization issued recommendations for the promotion of a professional/private life balance for employees, in particular taking parenthood into account.

Corporate values were reaffirmed and were the subject of an important internal communication in 2009 (see section 6.4.3.1.1 ("Commitment to sustainable development")). Each entity has designated an ethics correspondent and a free telephone number is now accessible for all employees in case of serious difficulties at work.

Since 2008, the support of specialist doctors is available to the management 24 hours a day, 7 days a week in case of a traumatic event in their unit, in order to advise them and organize all necessary aid for the relatives of the victims and the work teams.

At the end of 2008, a social agreement established a National Concil of Health at Work (*"Conseil National de Santé au Travail"*) which comprises representatives of business and trade unions, occupational physicians and hygiene, safety and working conditions Committees ("*Comités hygiène, sécurité, conditions de travail* – CHSCT").

## Accidents at work

10 years of prevention and training efforts have significantly reduced the number of accidents at work which result in leave, at EDF and the Group's companies. Progress in 2009 consolidated EDF's position as a leader among French businesses and European energy companies. The frequency rate in 2009 was 3.2 (3.4 in 2008) (number of accidents that resulted in a stoppage of work more than one day, and included in the current year and per million hours worked). The work injury safety ratio for 2008 is at 0.16 (0.17 in 2008) (number of calendar days, broken down by year, of accident-related absence (including those resulting from accidents in previous years) per thousand hours worked).

## Asbestos

In the past, the EDF group has used materials and facilities containing asbestos.

The substitution of materials containing asbestos in EDF's establishments and facilities began at the end of the 1980s, and all materials containing asbestos have been treated in accordance with regulations in effect. EDF has set up information measures and arrangements for the protection of employees and subcontractors working in the company in accordance with regulations in effect.

On July 15, 1998, EDF signed an agreement (revised in June 2002) with all the trade union federations for the prevention of and compensation for exposure to asbestos. Following this agreement, EDF implemented a pre-retirement plan for workers who are recognized as suffering from a work-related illness associated with asbestos, to establish voluntary financial assistance and a pension supplement both financed by EDF and to supply corporate assistance to sick workers and their families by means of information and support during the compensation process.

See section 20.5 ("Legal and arbitration proceedings") for a description of current procedures.

## Organization and working hours

Since October 1, 1999, the duration of the working week in France is 35 hours, with a functioning of services over a minimum of five days.

At the end of December 2009, 10.8% of EDF's personnel opted for a collective or individual reduction in working hours with partial compensation for salary loss.

In addition, in order to ensure continuity of operation of the facilities of EDF, ERDF and RTE, or to re-establish electricity supply in the shortest time possible in the event of a technical failure, part of EDF's personnel provides a continuous service on a 365 day-per-year basis and another part is on call outside of regular working hours.

# 17.4 Subcontracting

The agreement on socially responsible subcontracting within EDF signed in October 2006 was the subject of a positive report from the trade unions. The agreement has been extended indefinitely and in particular highlights the desire to maintain lasting industrial partnerships and services beyond short-term interests, so as to allow our services providers to be able to strengthen their activities and reinforce their capacities to develop in the long-term beyond the one-time or short-term transactions.

Through this agreement, EDF commits itself with subcontracting partners to concrete and realistic actions in order to ensure that their interventions are done in the best conditions of employment, qualification, work and health-safety. A monitoring Committee composed of the signatories meet twice a year and examines the actions planned under this agreement.

# 17.5 Global remuneration policy

In order to attract, encourage and develop the loyalty of the abilities that will allow EDF to face future challenges, EDF develops a policy of global remuneration, placing the company on the best practice observed in comparable lines of business.

This policy of global remuneration concerns:

- the recognition of the level of responsibility for the achieved results through the wage policy;
- the recognition of collective performance through profit sharing;
- the offer of employee savings and the contribution of the company to this saving;
- employee shareholding;
- social advantages.

## 17.5.1 Wage policy

In order to respect financial and budget constraints, the wage policy aims to recognize, in an equitable way, the contribution of each person to EDF's success.

Concerning managers, the annual remuneration is completed by a variable part based on individual performance: this principle has been extended to some OETAM's employees (*Ouvrier, Employé, Technicien et Agent de Maîtrise*).

For EDF, in 2009, the average annual gross remuneration was €39,769 (based on 13 months), and €24,051, €32,574, and €53,922 for the employees in the execution, technical areas, and for managers and engineers respectively, compared to: €23,660, €31,941 and €53,287 respectively in 2008.

## 17.5.2 Profit-sharing

EDF has had a profit-sharing scheme for its employees for more than 20 years through triennial agreements.

For each beneficiary, profit-sharing is composed of three parts based on criteria and objectives negotiated within its unit, its division and the company. Employees can choose either to receive payment and/or put it into either the Group's savings plan, or the Group's collective retirement saving plan.

The agreement signed in June 2008 covers the years 2008 to 2010. At a national level, six performance criteria relating to Sustainable Development were used for calculating the profit-sharing. Each financial year, the amount of profit-sharing distributed to employees will depend, for the national share on the achieved goals associated with these criteria. In addition, the agreement contains specific provisions on the profit share calculation in the event that EDF were to benefit, by decision of the public authorities, from the generally applicable profit-sharing regime. The agreement provides for, in particular, a more moderate profit share to be paid in such a case.

In 2009, this agreement enabled €196 million to be paid to employees of EDF, ERDF and RTE with respect to the 2008 financial year. This amount takes into consideration a collective profit-sharing supplement paid pursuant to article L. 3314-10 of the Labor code.

## 17.5.3 Group corporate savings plan

The Group Corporate Savings Plan (Plan d'Epargne Groupe, or "PEG") is open to employees of EDF and of the Group's French companies in which EDF owns directly or indirectly at least 40% of the share capital and which have signed up to the PEG.

Six mutual funds, including the EDF shares mutual fund (FCPE) are open to subscriptions; they totaled an outstanding amount of €4.3 billion at the end of 2009. Since January 1, 2010, a seventh fund, the FCPE *multi-entreprises d'économie solidaire*, has been open to subscription. The amounts from profit-sharing that the employees allocate to the Group Corporate Savings Plan are increased by 100% and voluntary payments are increased by 60% up to €610 and by 35% for the next €610, all in accordance with the legal subscription limits.

An agreement signed on June 12, 2009 enabled a new fund, the "*Emprunt EDF 2014*" fund, to be created, enabling the Group's employees in France

to subscribe, via the Group Corporate Davings Plan, to a bond issue launched by EDF in June 2009 for private individuals. Almost 20,000 employees were able to subscribe to this bond issue for a total amount of approximately €70 million.

In 2009, the total gross amount contributed to the PEG by EDF, ERDF and RTE amounted to €150 million.

## 17.5.4 Collective retirement savings plan (*Plan d'épargne pour la retraite collective*, or PERCO)

In accordance with the commitments undertaken in the context of the special pension fund reform, from 2008 EDF committed to the implementation of a collective retirement savings plan. The Group agreement, signed on July 17, 2009, enables the employees of EDF and eligible French subsidiaries of the Group that have subscribed to the plan, to save in the context of this new system.

Two mutual investment funds are offered to employees: an FCPE *multi-entreprises d'économie solidaire* and the "CAP HORIZONS" FCPE adapted to long-term saving offering a range of evolving management of saving.

The Perco has been open to EDF's employers since September 21, 2009 and totaled an outstanding amount of €33.7 million at the end of 2009. Amounts resulting from profit-sharing and profit-sharing supplements allocated to the Perco are abounded at 100% and voluntary payments are abounded at 100% for the first €100, 50% for the following €400 and 20% for the following €1,500. In addition, an initial aboundment of €100 was paid to all employees that opened a Perco in 2009.

For the year 2009, the total gross amount contributed to the Perco by EDF SA amounted to approximately €3 million.

## 17.5.5 Participation of employees in results

In 2008, EDF submitted a request to the Minister for the Economy, Industry and Employment to be registered on the list of public firms in which employees participate in the results. To date, this eligibility has not been implemented.

## 17.5.6 Time savings account (*Compte-Epargne Temps*, or CET)

In 2009, the CET agreement signed on April 2, 2008 was amended in order to permit the Perco to be added to by the monetization of acquired rights.

As of December 31, 2009, the amount of the hours saved in the time savings account by employees of EDF, ERDF and RTE reached €456 million.

## 17.5.7 Employee shareholding

At the time of the Company's public offering and more specifically in the framework of the Offer Reserved to Employees pursuant to law n° 2004-803 dated August 9, 2004 and law n° 86-912 dated August 6, 1986, 130,000 employees and pensioners became shareholders of the Company. In connection with the sale of 2.5% of EDF's capital on December 3, 2007, pursuant to law n° 2004-803 of August 9, 2004 and law n° 86-912 of August 6, 1986, an new Offer reserved to Employees and Former Employees was proposed from September 12 to September 22, 2008. Despite a particularly unfavorable financial market environment and a displayed price before benefits above market value, the offer was underwritten by an average of one in two employees of EDF and RTE and a little more than one in three employees of ERDF. Following the French State's allocation on January 30, 2009 of free shares to subscribers to the Offer reserved to Employees in connection with the public offering, and the delivery of 2.7 million shares from the free share allocation plan ACT 2007, as of December 31, 2009 EDF's employees and former employees held almost 45 million EDF shares (2.43% of the social capital). The majority of shares held by employees are held in the context of the Group Corporate Savings Plan, and frozen for a duration of 5 years.

## 17.5.8 Stock options

None.

## 17.5.9 Free grants of shares

The plan for the allocation of bonus shares, called ACT 2007, concerns the allocation of 2,883,183 shares. This is a plan for all Group's employees (the main exception being EnBW and Edison employees), i.e., approximately 150,000 beneficiaries spread over twenty-two countries. The distribution procedures for beneficiaries are covered by a collective agreement signed on June 8, 2007, by the three trade unions. This plan led to the allocation of an average of 19.2 shares per beneficiary employee, with a minimum of ten and a maximum of fifty.

The definitive allocation of these shares was realized in 2009, subject to two conditions:

- a collective performance condition, meaning a multi-year average increase of the Group's EBITDA[1] of at least 3% over the period 2006-2008. This condition was fulfilled on December 31, 2008.
- a condition of continuous presence during the acqusition period.

More than 2.7 million shares were delivered to beneficiary employees on August 31, 2009.

1 Growth excluding the impact of perimeter and at constant accounting principles without taking into account the volatility induced by the application of IAS 32/39.

# 17.6 Social policy

## 17.6.1 Electricity and Gas Industries employment status

As of December 31, 2009, almost all of the employees of EDF, ERDF and RTE were subject to the status applicable to employees of the Gas and Electricity Industries *(Industries Électriques et Gazières*, or "IEG")[1]. The IEG status was instituted by the French decree of June 22, 1946 pursuant to the French law of April 8, 1946, which nationalized the electricity and gas industries. It relates to active and retired staff of the IEG branch companies.

In accordance with the provisions of Article L. 2233-1 and L. 2233-2 of the French Labor Code, the provisions of the status may be amended and the terms of their application determined contractually through company-wide agreements, within the scope established by the status. Moreover, the French law n° 2000-108 of February 10, 2000 relating to the modernization and expansion of the public service for electricity enlarged this scope to industry-wide agreements (articles L. 713-1 and L. 713-2 of the French Labor Code).

The status, in its main provisions, has evolved as follows:

- the special health-maternity insurance scheme reformed by the decree of March 30, 2006 is now managed by the IEG Health Insurance Fund *(Caisse d'Assurance Maladie des IEG* or CAMIEG);
- the system of employee representative institutions (*Institutions représentatives du personnel* or IEP) was reformed by the law of August 9, 2004, in order to adapt to the rules of the Labor Code. This reform resulted in the amendment of articles 3, 31, 33 and 34 of the status by decree of April 11, 2007.

Furthermore, the special pension scheme was reformed in 2008. To take this reform into account, annex 3 of the law was completely rewritten by two decrees:

- the decree n° 2008-627 of June 27, 2008 relating to the pension and disability regime for employees in the electricity and gas industries after the reform of the special pension system (see section 17.6.3 "Special pension system" below);
- the decree n° 2008-1514 of December 30, 2008 relating to certain special social security schemes and supplementary pension scheme of social insurance in favor of agents not titular with the State and with public authorities. This decree has made some clarifications (early departure for long careers, increase the rate of premium, revaluation of pensions from April 1, of each year). The articles 4, 6, 20, 22, 23, 24 and 26 of the code were amended by the decree n° 2008-653 of 2 July 2008 amending the national status of employees in electricity and gas industries, to repeal the age and nationality conditions at hiring and taking into account, in particular, the reform of the special pension and disability schemes (modification of conditions for inactivity, creation of a leave to raise a child under eight years old, benefit of family benefits, etc.).

For the rest, the status includes a set of provisions relating to areas similar to those of other industry-wide agreements.

1 Employees of certain of the Group's French subsidiaries are also subject to IEG status (for example, Électricité de Strasbourg).

## 17.6.2 Social dialogue and employee representation

### 17.6.2.1 SOCIAL DIALOGUE IN FRANCE

The social dialogue, traditionally dense within EDF, has developed since 2004 by a widespread use of collective negotiation in the context of social agendas, which determine over a period of two years, in agreement with the trade unions, the list and timetable of the negotiations to be undertaken.

The third social agenda for 2008-2010, signed by all trade unions (CGT, CFDT, CFTC, FO and CFE-CGC) on July 10, 2008, will expire in July 2010.

It imposes a commitment to consultation and negociations in three fields:

- new career opportunities for employees professional paths:
  In the context of changing jobs and longer working life, induced by the pension reform, negotiations on the Provisional Management of Employments and Skills (*Gestion Prévisionnelle des Emplois et des Compétences* or GPEC) led to the signature on January 29, 2010 of an agreement seeking, in particular, to give employees greater visibility on employment and jobs so they can build a challenging career. It is also in this context that the 2009-2012 agreement was unanimously signed by trade unions on February 25, 2009, for the integration of disabled persons within EDF.
- total remuneration and protection of employees:
  The latest negotiations have enabled the introduction in the company of a collective retirement savings plan[2] (see section 17.5.4 ("Collective retirement savings plan")) and a supplementary pension plan[3] (see section 17.6.3 ("Special pension system")). The universal service assistance check (*Chèque emploi service universel* or CESU) was implemented on February 24, 2009 by EDF and the CMCAS Coordination Committee for the care of children aged 3 months to 3 years. This financial assistance is financed, on an equal basis, by the employer, the CMCAS Coordination Committee and the beneficiary employee.
- management of time and work life quality of employees:
  An agreement was signed by all trade unions on the creation of a National Council of health at work[4] *(Conseil national de la santé au travail)*, a conventional council of social dialogue and reflexion in the field of health policy at work. A negociation on the working time of managers is under way. In accordance with legal provisions, a negociation on senior employees was conducted in 2009. In the absence of an agreement signed with the trade unions, an action plan has been established and presented to the Central Work Council in December 2009, to be developed in 2010 and which aims to promote keeping employees aged 55 and over in employment and improving their working conditions.

2 Agreement of July 17, 2009 on the collective retirement savings plan of the EDF group, signed by CFDT, CFTC, CFE-CGC and FO.

3 Agreement of December 12, 2008 relating to the implementaion of a collective supplementary pension plan in the group EDF signed by CFDT, CFTC and CFE-CGC.

4 Experimental agreement of November 19, 2008 establishing a National Council of health at work in EDF SA, signed by all trade unions.

### 17.6.2.2 EMPLOYEE REPRESENTATION IN FRANCE

Until 2007, EDF and the companies in the IEG professional sector had special employee representation bodies.

The law of August 9, 2004 on the electricity and gas Public Service obliged all companies in the professional sector to adapt their employee representation institutions (*institutions représentatives du personnel* or IRP) to comply with the common provisions of the law.

During the last professional elections of November 29, 2007, new IRP were set up. Since then, the statutory bodies have been replaced by the general-law institutions: local Establishment Councils and Central Works Council. Furthermore, employee representatives were elected.

The 3-year mandates of the current employee representatives expire in November 2010. The next professional elections will therefore be held at that date.

In addition, these elections will lead to the application of the provisions of the law of August 20, 2008 relating to social democracy, which significantly reformed the rules for trade union representativeness. Now, to be recognized as representative, a trade union must demonstrate a score of at least 10% of votes in the first round of elections in the local Establishment Councils. This first round, previously reserved for representative trade unions (CGT, CFDT, CFTC, FO and CFE-CGC), will be open to any legally constituted trade union. This will be the first audience measurement, thereby determining the national representativeness of the trade unions.

Furthermore, according to the provisions of the social democracy law in force since 2008, several non-representative trade unions were created (8 by SUD, 1 by Unsa, 1 by CFTC), and as many representatives of these union branches.

#### THE CENTRAL DESK OF SOCIAL ACTIVITIES ("*CAISSE CENTRALE D'ACTIVITÉS SOCIALES*" OR CCAS)

Unlike the common practice in French law, managing social and cultural activities is delegated to specific organizations in the IEG branch:

- the CCAS which deals with activities at the national level;
- the *Caisses Mutuelles Complémentaires et d'Action Sociales* (CASs) which administer local or decentralized social and cultural activities: until April 1, 2007, the CAS also managed the special IEG health-insurance scheme.
- the CAS Coordination Committee: it represents the CASs at the national level. It is responsible for distributing resources between the CCAS (71% of the 1% paid by the IEG branch companies) and the CASs (29%).

Following the IEG branch negotiations and the creation on April 1, 2007 of the IEG Health Insurance Fund (*Caisse d'Assurance Maladie des IEG* or CAMIEG) dedicated to managing the special IEG health insurance scheme, solely the CCAS and the CASs are now responsible for the management of social activities.

During 2010 a new organization of the management of social activities should gradually be implemented, leading to a decrease in the number of agencies and pooling of the management of certain functions (real estate, accounting, etc.). New management arrangements for staff working in these agencies are also under consideration.The financing of social activities within the IEG is provided by a deduction of 1% from the operating income of the companies distributing gas and electricity, principally EDF, GDF SUEZ and the Local Distribution Companies. In 2009, the amount recorded by EDF, ERDF and RTE for this 1% was €307 million. To be added to this, in accordance with the provisions of Article R. 2323-20 of the French Labor Code, are expenses related to transportation, food and accommodation which amount to €115 million in 2009 for EDF and ERDF.

The CCAS, the CASs and the CAS Coordination Committee are legal entities and are fully independent. The CCAS is administered exclusively by representatives of the employees and is placed under the supervision of the public authorities. Neither EDF nor any other company of the IEG branch is represented on it.

### 17.6.2.3 SOCIAL DIALOGUE AND REPRESENTATION OF GROUP EMPLOYEES

In the Group's other companies, mainly abroad, employee representation is organized in accordance with applicable local laws and regulations.

#### SOCIAL DIALOGUE ENTITIES

Since the end of 2001, the Group created a European Works Council (*Comité d'Entreprise Européen*, or the "CEE") consulted on the Group's major policies. In May 2005, a revision of the agreement brought new provisions relating to the functioning of this body. The CEE of the EDF group is now composed of 33 permanent members and is informed of the Group's economic, financial and social strategies.

Through its working groups, the CEE started numerous analysis relating to the drafting of human resources policies at an international level, notably concerning health and safety within the different companies of the Group in Europe or in relation with the opening of the negotiations on the social responsibility of the EDF group.

An agreement relating to the France Group Committee has been signed on September 1, 2008 between the 5 representative trade unions. In accordance with the legal criteria, 14 companies of the EDF group (including RTE and ERDF) have been incorporated into the perimeter of the Group Committee composed of 28 members. To date, the Group Committee has met two times.

#### COMPANY'S SOCIAL LIABILITY (RSE) FRAMEWORK AGREEMENT

The EDF RSE framework agreement[1] was negotiated and signed on January 24, 2005 with the employee representatives and trade unions of all of the Group's companies and with the four international trade union federations for the industry.

This agreement provides the Group with a basis for shared commitments and common orientations, which apply to EDF and to all of the companies that it controls in accordance with the principle of subsidiarity and contributes to the long-term improvement of its performance, the construction of a Group identity, the renewal and broadening of the subjects of social dialogue.

According to this agreement, a social dialogue started within all signing companies in order to identify in a concerted way, the provisions of the local implementation and the priorities.

An implementation report is drafted and presented each year to a special body at Group level: the Dialogue Committee on the Group's Social Responsibility.

Highlighting the progress made, the signing parties have renegotiated a new agreement in the same spirit as the first one. Signed in January 2009 for a period of 4 years, this second agreement strengthens the Group's commitments, particularly on topics such as subcontracting, the fight against climate change and biodiversity.

1 An International Framework Agreement (IFA) is an agreement negotiated between a company and international and/or national trade unions at a global level.

Six transversal matters of the Group were subject to a deepening in the Committee in relation with the management in 2009: career paths, anticipating and supporting the social consequences of industrial restructuring, the fight against discrimination, relations with subcontractors, vulnerable customers, and information sharing and social dialogue.

## 17.6.3 Special pension system

The pension system for the electricity and gas industries is a special social security system. Defined within the framework of the IEG employees' status, the special system applies to all employees in the professional branch of the IEG. It was reformed by the law of August 9, 2004 concerning both the management and the financing of the system. The special pension system has been managed by the *Caisse Nationale des IEG* (CNIEG), since January 1, 2005. This pension and benefit management body has managed the risk of old age but from now on it will also manage the risks of accidents in the workplace, work-related illness, invalidity and death as well as the family compensation for inactive people.

Title IV of the law of August 9, 2004 and its implementation decrees set forth the following principles regarding the financing of the special IEG pension system from January 1, 2005:

The sole pension paid by the CNIEG to each IEG retired people is financed:
- partly by the CNAVTS, the AGIRC, and the ARRCO as part of the financing agreements which provide for the affiliation conditions of the IEG special system with the standard mandatory system. The CNIEG pays to the standard mandatory systems the contributions paid by employees and employers of the IEG branch. In exchange, the CNIEG receives from standard mandatory systems, the contributions that would have been paid to the former employees (inactive) of IEG companies if they had been affiliated to the standard mandatory systems, called base systems;
- pursuant to agreements concluded in 2005 with ARRCO and AGIRC for the affiliation of the IEG special pension scheme to supplementary pension plans, the parties to both agreements have started the technical work leading up in 2010 to the final determination of the rate of validation of the rights acquired before January 1, 2005 under the affiliation of the scheme;
- partly by a percentage of the CTA levy (*Contribution Tarifaire d'Acheminement*, or "CTA") paid on gas and electricity transmission and distribution;
- the remainder, corresponding to specific rights in relation to the IEGs' retirement, is financed by employers.

The reform of pension finance instituted by the law of August 9, 2004 has not had any effect on the standard systems, for energy consumers, and for the French State budget.

Without challenging the new funding and management modalities of the special pension fund of the IEG pensioners, a reform of pension rights came into force on July 1, 2008. As in the regime of the administrative employees (law of August 21, 2003), it mainly consists of introducing the following elements:
- a gradual lengthening of the insurance period in order to benefit from a full pension;
- discount and premium plans depending on the totaled insured period (all systems combined) by the insured;
- a rule of adjustment of pensions now linked to price changes rather than wage evolutions;
- new conditions, which are identical for men and women, in order to qualify for family benefits regarding retirement plans.

These changes as well as the removal of the fifteen years service condition to benefit from a special pension scheme were introduced in Annex 3 of the National Personnel IEG Code by the decree n° 2008-627 of June 27, 2008. The decree also changed the special disability scheme for IEG pensioners.

In addition, the decree n° 2008-653 of July 2, 2008, which removes age and nationality conditions in hiring, has introduced various changes to the national status of employees and in particular an age limit to 65 years. The decree on forced retirement was repealed by decree n° 2008-1072 of October 20, 2008.

The decree n° 2008-1514 of December 30, 2008 issued the following provisions applicable from January 1, 2009:
- implementation of an early departure program for long career;
- adjustment of retirement and disability pensions as of April 1 in the same conditions as those applicable to the general regime and the administrative employees regime;
- increase in the premium rate as for other pension schemes;
- removal of the limit to employment/retirement pension accumulation as applicable to the general regime.

Negotiations instigated in the IEG professional branch in November 2007 and carried on in 2008 in order to accompany developments of the special pension scheme covered measures on raising payments, support measures for extended working lives, consideration of special features of certain job functions and improvements in the social protection provisions (supplementary pension, contingency). The coverage of the branch obligatory complementary contingency (death, education annuities) entered into force on January 1, 2009, along with the complementary pension plan established by EDF group in implementing the branch status of February 21, 2008 for statutory employees. The EDF group's *Plan d'Epargne Retraite Collectif* (PERCO) in France was implemented, for EDF, on September 21, 2009. Funding modalities of the complementary pension plan along with the policy of supplementing the PERCO are determined at the level of the company. Finally, branch negotiations on operating services and the consideration of special feature of certain job functions finished at the end of 2009 and the agreement is open to signature until February 2010.

## 17.6.4 IEG complementary healthcare benefits system

The IEG status instituted for working and retired personnel of the branch, a special healthcare benefits system, a mandatory social security system. The system is managed by the elected representatives of the employees and IEG pensioners. Its management, which was made by the *Caisses Mutuelles Complémentaires et d'Action Sociale* (CAS) and their Coordination Committee has been gradually transferred to IEG Health Insurance Fund (CAMIEG). The reintegration process of the agents available to CAS for the management of the special pension scheme and who did not wish to be recruited by the CAMIEG was completed by the end of 2009.

The system is supervised by the French State, which ensures compliance with the statutory documents, sets out the regulations, the level of contributions and services.

Created on April 1, 2007, CAMIEG is gradually setting up its central services and regional satellite offices, as well as partnerships with the ordinary system. Since July 2008, the *Caisse Primaire d'Assurance Maladie des Hauts-de-Seine* is processing the healthcare forms (paper and electronic forms) for the CAMIEG. However, it is facing operational difficulties related to the centralization of the system and to the shortage of skilled personnel available in this field. The regional offices of the CAMIEG are being gradually established. Following discussions between partners in the professional branch conducted in several stages, the regulations for the system were modified initially in 2005 by the decrees of February 15, 2005, on the financing, then a second time in 2007 by the decree of March 31, 2007, regarding the organization, the management and the governance of the system. Since 2005, the employers have no longer contributed to financing retirement pensions.

In 2007, a professional branch negotiation was opened to have additional cover of medical expenses repayment. This negotiation, suspended for a time, was resumed in 2009 in order to implement the additional cover in the second quarter of 2010.

# Major shareholders

18



## 18.1 Breakdown of share capital and voting rights

During the last three financial years, the breakdown of EDF's share capital was as follows:

| | Situation as of December 31, 2009 | | | Situation as of December 31, 2008 | | | Situation as of December 31, 2007 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number of Shares | Capital % | Voting rights % | Number of Shares | Capital % | Voting rights % | Number of Shares | Capital % | Voting rights % |
| French State | 1,561,973,336 | 84.48 | 84.49 | 1,542,738,898 | 84.66 | 84.82 | 1,546,080,439 | 84.8 | 84.8 |
| Public (institutions and retail investors) | 241,815,830 | 13.08 | 13.08 | 239,497,796 | 13.15 | 13.17 | 240,850,217 | 13.3 | 13.3 |
| Employee shareholding[4] | 44,841,827[1] | 2.43 | 2.43 | 36,672,396[2] | 2.01 | 2.01 | 35,110,931[3] | 1.9 | 1.9 |
| Treasury shares | 235,669 | 0.01 | – | 3,262,000 | 0.18 | – | 129,503 | 0 | 0 |
| **TOTAL** | **1,848,866,662** | **100** | **100** | **1,822,171,090** | **100** | **100** | **1,822,171,090** | **100** | **100** |

*(1) This figure includes 40,251,843 shares (representing 2.18% of capital) on the basis of the definition of employee share ownership within the meaning of Article L. 225-102 of the Commercial Code (including 38,816,525 shares owned by EDF's current and former employees through mutual fund (FCPE) "EDF Shares" ("Actions EDF") of the EDF group savings plan and EDF group International saving plan. This figure also includes 4.6 million shares representing 0.25% stake held in pure registered form or administered without delay of non-selling or beyond the periods of non-selling by employee shareholders and former employees.*

*(2) This figure includes 32,984,022 shares (representing 1.81% of capital) on the basis of the definition of employee share ownership within the meaning of Article L. 225-102 of the Commercial Code (including 32,587,194 shares owned by EDF's current and former employees through mutual fund (FCPE) "EDF Shares" ("Actions EDF") of the EDF group savings plan and EDF group International saving plan. This figure also includes 3,688,374 shares representing 0.20% stake held in pure registered form or administered without delay of non-selling or beyond the periods of non-selling by employee shareholders and former employees.*

*(3) This figure includes shares owned by EDF's current and former employees through mutual fund (FCPE) "EDF Shares" ("Actions EDF") of the EDF group savings plan and EDF group International saving plan (29,691,771) and shares subscribed for, outside PEG, with a two years non-selling delay as part of the Offer Reserved for Employees at the opening of EDF's capital. This figure does not include shares subscribed for, without delay of non-selling, as part of the Offer Reserved for Employees at the opening of EDF's capital.*

*(4) The number of shares includes the 874.3 shares of the compartment "Énergie Multi"of the FCPE "EDF Shares", corresponding to 8,743 shares of the Company (see section 21.1.2 ("Ownership of shares and control by the Company")).*

The Company has completed a study on the identifiable holders of shares in bearer form as of January 19, 2010, which has been used to analyze the breakdown of the share capital and its breakdown by geographical area.

| | Number of shares | Capital % |
|---|---|---|
| French State | 1,561,973,336 | 84.48 |
| Institutional investors Europe excluding France | 72,367,659 | 3.91 |
| Institutional investors rest of the world | 63,650,594 | 3.44 |
| Institutional investors France | 60,119,520 | 3.25 |
| Retail investors | 45,678,057 | 2.47 |
| Employee shareholding | 44,841,827 | 2.43 |
| Treasury shares | 235,669 | 0.01 |
| **TOTAL** | **1,848,866,662** | **100** |

No shareholder other than the French State holds directly or indirectly more than 5% of the share capital and voting rights.

## 18.2 Market for the Company's shares

Since November 21, 2005, EDF shares have been listed on Nyse Euronext Paris.

The following graphic sets forth the development of the trading price of the Company's shares since that date until March 19, 2010:

**EDF share price from the IPO to March 19, 2010**


(Source: Thomson Reuters).

The table hereunder sets forth the development of the Company's share market price from January 2009 until March 19, 2010, inclusively:

| | Transactions | | Transactions Closing Market Price (in Euros) | |
|---|---|---|---|---|
| *Listing Period* | In millions of shares | In millions of Euros(1) | Highest | Lowest |
| January 2009 | 26.7 | 1,061 | 43.76 | 37.38 |
| February 2009 | 39.7 | 1,315 | 38.35 | 30.51 |
| March 2009 | 39.5 | 1,137 | 31.10 | 27.31 |
| April 2009 | 35.0 | 1,156 | 36.92 | 29.56 |
| May 2009 | 38.5 | 1,395 | 38.48 | 34.41 |
| June 2009 | 26.3 | 924 | 37.00 | 33.94 |
| July 2009 | 38.1 | 1,232 | 34.93 | 30.83 |
| August 2009 | 27.4 | 965 | 36.95 | 33.53 |
| September 2009 | 43.6 | 1,708 | 41.53 | 35.97 |
| October 2009 | 39.9 | 1,576 | 40.63 | 38.00 |
| November 2009 | 31.9 | 1,215 | 39.49 | 37.00 |
| December 2009 | 19.7 | 793 | 41.76 | 38.90 |
| January 2010 | 25.4 | 1,044 | 42.14 | 38.92 |
| February 2010 | 32.0 | 1,223 | 39.39 | 36.65 |
| March 2010 (until March 19, 2010) | 21.6 | 818 | 38.43 | 37.01 |

*(1) Transactions in millions of Euros correspond to the monthly sum of the daily number of exchanged securities multiplied by the market closing price of that same day. (Source: Thomson Financial).*

### YEAR 2009

During 2009, EDF's share market increased by 0.1%, the French index CAC 40 by 22.3% while the sector index Euro Stoxx Utility fell by 0.8%.

As of December 31, 2009, the closing market price of the EDF share was of €41.56 (against €41.50 on December 31, 2008). Its lowest closing market price during 2009 was €27.31 on March 13, and its highest closing market price was €43.76 on January 9.

As of December 31, 2009, EDF's market capitalization amounted to €76.8 billion.

### YEAR 2010

Since the beginning of 2010, and until March 19, 2010 included, EDF's share market price fell by 9.0%, the French index CAC 40 by 0.3% and the sector index Euro Stoxx Utility by 5.1%.

As of March 19, 2010, the closing market price of the EDF share was of €37.81 (against €41.56 on December 31, 2009). Its lowest closing market price during 2010 until March 19, 2010 was €36.65 on February 25, and its highest closing market price was €42.14 on January 8.

On March 19, 2010, EDF's market capitalization amounted to €69.9 billion.

## 18.3 Agreement which could lead to a change of control

To EDF's knowledge, there is no agreement which could later lead to a change of control.

# Related party transactions

19



Apart from the information presented below, the details of the transactions concluded by the Company with related parties for the 2009 financial year is mentioned in note 46 to the consolidated financial statements for the year ended December 31, 2009.

## 19.1 Relationships with the French State

As of December 31, 2008, the French State held 84.48% of the share capital and 84.49% of the voting rights of EDF. As mentioned in section 4.2.4 ("Risks relating to the structure and changes within the Group") above, modifications to the share capital may not have the effect of reducing the shareholding of the French State to less than the threshold of 70%.

The French State is thus entitled, as any majority shareholder, to control Company decisions requiring the shareholders' approval. In particular, the French State, as the majority shareholder, can in practice influence the result of the shareholders' vote in electing directors and more generally in any question which is subject to the shareholders' vote.

The French Government Shareholding Agency (*Agence des Participations de l'Etat*, or "APE"), created by the French Decree n° 2004-963 of September 9, 2004, exercises the duties of the French State in its capacity as shareholder in the Company, and, as such, suggests and implements the decisions and orientations of the French State in cooperation with all of the Ministries involved.

In accordance with the legislation applicable to all companies of which the French State is the majority shareholder, EDF may be subject to certain French State inspection procedures, in particular through an economic and financial inspection assignment, pursuant to the French Decree n° 55-733 of May 26, 1955 relating to the economic and financial verification by the French State, and of the French Decree n° 53-707 of August 9, 1953 relating to French State inspection of national public companies and certain entities with an economic or social purpose.

An agreement on the monitoring of external growth investments of the EDF group entered into between the French State and the EDF group on July 27, 2001, imposes procedures with respect to the French State's approval and information (prior or otherwise) for certain Group equity participation, extension or disposal projects. The agreement also implemented a procedure for monitoring the results of these external growth transactions.

EDF is also subject to auditing procedures of the French Court of Auditors *(Cour des Comptes)* and of the French Parliament. Thus, in addition to the examination carried out by the two auditors, the accounts and the administrative management of the Company and, as appropriate, that of its direct majority subsidiaries, come under the jurisdiction of the French Court of Auditors in accordance with Articles L. 111-4, L. 133-1 and L. 133-2 of the French Code of Financial Jurisdictions *(Code des Juridictions Financières)*. Thus, after examining the accounts, the French Court of Auditors may also request the communication of all documents necessary for accomplishing its auditing mission, and hear any person of its choosing. Finally, the French Statutory Decree of October 30, 1935 organizing the French State's inspection of companies, trade unions and associations or companies of any nature that have received the financial support of the French State, allows the Minister in charge of the Economy to subject EDF to the verifications of the general finance inspection *("Inspection générale des Finances")*.

Moreover, the sale of EDF shares by the French State or the dilution of the French State's shareholding in the share capital of EDF is subject to a special procedure pursuant to the applicable regulations, and in particular to the French laws n° 86-793 of July 2, 1986, n° 86-912 of August 6, 1986 and n° 93-923 of July 19, 1993. Finally, like other electricity generators, EDF participates in the multi-year generation investment program decided by the Minister in charge of the Energy. This programming sets, in particular, the objectives with regards to the allocation of generation capacities per primary energy source. For more details on the multi-year programming of generation investments, see section 6.5.1.2 ("French legislation") above.

On October 24, 2005, the French State and EDF entered into a contract dealing with the public service commitments assigned to EDF (see section 6.5.1.2 ("French legislation") above).

The French State also intervenes within the framework of the regulation of the electricity and gas markets (see section 6.5.1.2 ("French legislation") above), in particular, for authorizations for planning and operating generation

installations and for certificates awarding the right to a purchase obligation, for establishment of regulated tariffs, for the establishment of tariffs for transmission and distribution as well as for the amount of the Contribution to the public service charges for electricity (*Contribution aux charges du service public de l'électricité*, or "CSPE").

Finally, EDF supplies electricity to various public sector entities: Government services, local authorities and public sector companies. These entities are today eligible customers for which EDF competes with other electricity suppliers. Some of them have exercised their right of eligibility and changed suppliers.

## 19.2 Relationships with GDF SUEZ

EDF and Gaz de France were created in the form of EPICs pursuant to the French law of April 8, 1946. Article 5 of this law provides that special conventions could be entered into between the two public companies for the organization of joint services or the transfer to one of these two companies of these services, which are normally within the domain of the other. Pursuant to this law, joint entities have been created within EDF and Gaz de France: the Distribution Division that became EDF GDF Services, the Personnel and Social Relations Division (*Direction du Personnel et des Relations Sociales*, or "DPRS") which became the National Centre for Assessment and Professional relations ("CNERP") and the Information Technology and Telecommunications Division (*Direction Informatique et Télécommunications*, or "DIT").

The law of August 9, 2004 modified Article 5 of the French law of 1946, which henceforth provides that EDF and Gaz de France, both majority-owned by the French State, were entitled to create joint services by contract. The creation of such services is compulsory in the distribution sector for:

- the building of infrastructures;
- acting as main contractor for works;
- the operation and maintenance of networks;
- meter reading operations; and
- generally, other missions relating to these activities.

The common services thus created may also provide services on behalf of certain other distributors.

Article 27 of the law of December 7, 2006 concerning the energy sector imposed the creation of a common service to the two subsidiaries, respectively in charge of electricity and gas distribution, with no legal personality.

Following the transfer of supply activities to subsidiaries, the two subsidiaries of EDF (ERDF) and Gaz de France (now, GDF SUEZ) (GrDF) share a common service in accordance with the legal framework. For more details regarding the organization of this mixed service see section 6.2.2.2.4 ("ERDF organization") above.

## 19.3 Relationships with the AREVA group

See section 4.3 ("Dependency factors").

## 19.4 Relationships with Group entities within the scope of consolidation

EDF has entered into various commercial contracts with its subsidiaries and affiliates. EDF and EnBW, in particular, entered into a cooperation agreement in 2001, which provides for the methods of cooperation between the two companies. This contract was entered into for an unlimited duration, and could not be terminated before 2006.

EDF has also entered into cash flow agreements with controlled operating subsidiaries (i.e., excluding Edison, EnBW and Dalkia, (see section 7 ("Organizational Structure – Contracts within the Group")). EDF has also granted guarantees to some of its subsidiaries that are mentioned in the Group's consolidated off-balance sheet commitments.

EDF, on one hand and RTE and ERDF on another hand, have entered into agreements as regard their technical and financial relationships.

The agreements entered into with companies that are proportionally consolidated and with companies that are consolidated under the equity method relate in particular to the sale and purchase of energy.

# 20 Financial information on assets, the financial statements and results of the Company



## 20.1 Historical financial information

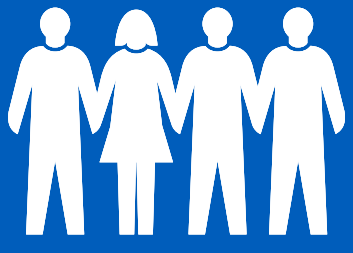
Pursuant to article 28 of the European Commission Regulation 809/2004 of April 29, 2004, the following information is included by reference in the present *Document de Référence:*

- the consolidated financial statements at December 31, 2007, prepared under international accounting standards, as well as the associated statutory auditors' report, appear respectively in section 20.1 (pages 207 to 307) and 20.2 (page 308) of EDF's 2007 *Document de Référence;*
- the consolidated financial statements at December 31, 2008, prepared under international accounting standards, as well as the associated statutory auditors' report, which are mentioned in section 20.1 (pages 229 to 335) and 20.2 (page 338) of EDF's 2008 *Document de Référence.*

The consolidated financial statements at December 31, 2009 (established under IAS-IFRS standards) are set forth below.

# Consolidated financial statements

## at December 31, 2009



**These financial statements will be submitted for approval by the general Shareholders' Meeting of May 18, 2010**

# Contents

# Consolidated Income Statements

| *(in millions of Euros)* | Notes | 2009 (2) | 2008 (1) |
|---|---|---|---|
| Sales | 9 | 66,336 | 63,847 |
| Fuel and energy purchases | 10 | (26,558) | (26,590) |
| Other external expenses | 11 | (11,231) | (10,258) |
| Personnel expenses | 13 | (11,452) | (10,476) |
| Taxes other than income taxes | 14 | (2,917) | (3,171) |
| Other operating income and expenses | 15 | 3,288 | 2,083 |
| Prolongation of the transition tariff system (TaRTAM) – law of August 4, 2008 | 16 | - | (1,195) |
| **Operating profit before depreciation and amortization** | | **17,466** | **14,240** |
| Net depreciation and amortization | | (6,976) | (5,714) |
| Net increases in provisions for renewal of property, plant and equipment operated under concession | | (490) | (526) |
| (Impairment) / reversals | 17 | (66) | (115) |
| Other income and expenses | 18 | 173 | 25 |
| **Operating profit** | | **10,107** | **7,910** |
| Cost of gross financial indebtedness | 19.1 | (2,709) | (1,657) |
| Discount expense | 19.2 | (3,229) | (2,797) |
| Other financial income and expenses | 19.3 | 1,413 | 1,404 |
| **Financial result** | 19 | **(4,525)** | **(3,050)** |
| **Income before taxes of consolidated companies** | | **5,582** | **4,860** |
| Income taxes | 20 | (1,614) | (1,599) |
| Share in income of companies accounted for under the equity method | 26 | 120 | 367 |
| **Group net income** | | **4,088** | **3,628** |
| Minority interests | | 183 | 144 |
| **EDF NET INCOME** | | **3,905** | **3,484** |
| **Earnings per share in Euros :** | | | |
| Net earnings per share in Euros | 33.4 | 2.14 | 1.91 |
| Diluted earnings per share in Euros | 33.4 | 2.14 | 1.91 |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs" and changes in presentation of Edison trading revenues.*

*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *Constellation Energy Nuclear Group (CENG) from November 6, 2009;*
- *SPE from November 26, 2009.*

# Statement of net income and gains and losses recorded directly in equity

| *(in millions of Euros)* | 2009 | 2008 (1) |
|---|---|---|
| **Group net income** | **4,088** | **3,628** |
| Changes in the fair value of available-for-sale financial assets (2) | 1,257 | (3,169) |
| Changes in the fair value of available-for-sale financial assets transferred to income on sale | 60 | (83) |
| Changes in the fair value of hedging instruments (3) | (1,393) | (2,104) |
| Changes in the fair value of hedging instruments transferred to income on sale | 1,329 | 358 |
| Translation adjustments (4) | 390 | (1,578) |
| Taxes | (228) | 1,435 |
| **GAINS AND LOSSES RECORDED DIRECTLY IN EQUITY** | **1,415** | **(5,141)** |
| **Net income and gains and losses recorded directly in equity** | **5,503** | **(1,513)** |
| EDF net income | 5,285 | (1,590) |
| Minority interests | 218 | 77 |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) These changes essentially concern EDF and EnBW. In 2008, they reflect the effects of the financial market crisis (see note 27.3.2).*

*(3) These changes correspond to the effects of fair value measurement of hedging instruments. The change at December 31, 2009 essentially results from fair value adjustments to exchange rate hedges totaling €(797) million and commodity contracts €(412) million (see note 41.4).*
*The change at December 31, 2008 primarily results from the upturn in prices on the energy markets observed at the end of the year, which led to fair value adjustments totaling €(3,216) million on coal, electricity and oil product contracts documented as hedges, mainly at EDF, EDF Energy, EnBW, and Edison. It also includes the €857 million effect of hedges of net investments in foreign operations by EDF and EDF International at December 31, 2008.*

*(4) The 2009 translation adjustments mainly concern the rise in the pound sterling against the Euro.*

# Consolidated Balance Sheets

| ASSETS *(in millions of Euros)* | Notes | 12.31.2009 (2) | 12.31.2008 (1) |
|---|---|---|---|
| Goodwill | 21 | 13,526 | 6,807 |
| Other intangible assets | 22 | 5,455 | 3,099 |
| Property, plant and equipment operated under French public electricity distribution concessions | 23 | 42,451 | 41,213 |
| Property, plant and equipment operated under concessions for other activities | 24 | 28,251 | 26,959 |
| Property, plant and equipment used in generation and other tangible assets owned by the Group | 25 | 58,734 | 39,403 |
| Investments in companies accounted for under the equity method | 26 | 4,421 | 2,852 |
| Non-current financial assets | 27 | 24,498 | 18,103 |
| Deferred tax assets | 20 | 3,099 | 2,900 |
| **Non-current assets** | | **180,435** | **141,336** |
| Inventories, including work-in-process | 28 | 12,662 | 9,290 |
| Trade receivables | 29 | 19,633 | 19,144 |
| Current financial assets | 27 | 12,450 | 15,329 |
| Current tax assets | 20 | 376 | 992 |
| Other receivables | 30 | 8,111 | 8,530 |
| Cash and cash equivalents | 31 | 6,982 | 5,869 |
| **Current assets** | | **60,214** | **59,154** |
| **Assets classified as held for sale** | 32 | **1,265** | **2** |
| **TOTAL ASSETS** | | **241,914** | **200,492** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *Constellation Energy Nuclear Group (CENG) from November 6, 2009;*
- *SPE from November 26, 2009.*

| EQUITY AND LIABILITIES *(in millions of Euros)* | Notes | 12.31.2009 (2) | 12.31.2008 (1) |
|---|---|---|---|
| Capital | 33 | 924 | 911 |
| EDF net income and consolidated reserves | | 27,028 | 22,286 |
| **Equity (EDF share)** | | **27,952** | **23,197** |
| Minority interests | | 4,773 | 1,801 |
| **Total Equity** | 33 | **32,725** | **24,998** |
| Provisions for back-end nuclear cycle | 35.1.1 | 17,531 | 14,686 |
| Provisions for decommissioning and last cores | 35.1.2 | 20,003 | 13,886 |
| Provisions for employee benefits | 36.1 | 13,412 | 12,890 |
| Other provisions | 37 | 1,188 | 1,953 |
| **Non-current provisions** | | **52,134** | **43,415** |
| Grantors' rights in existing assets operated under French public electricity distribution concessions | 38 | 19,667 | 19,025 |
| Grantors' rights in assets to be replaced operated under French public electricity distribution concessions | 38 | 20,217 | 19,491 |
| Non-current financial liabilities | 39 | 44,755 | 25,584 |
| Other liabilities | 44 | 5,725 | 5,628 |
| Deferred tax liabilities | 20 | 7,652 | 4,134 |
| **Non-current liabilities** | | **150,150** | **117,277** |
| Provisions | 34 | 5,858 | 4,722 |
| Trade payables | 43 | 13,348 | 13,957 |
| Current financial liabilities | 39 | 16,560 | 18,958 |
| Current tax liabilities | | 564 | 383 |
| Other liabilities | 44 | 22,298 | 20,197 |
| **Current liabilities** | | **58,628** | **58,217** |
| **Liabilities related to assets classified as held for sale** | 32 | **411** | **-** |
| **TOTAL EQUITY AND LIABILITIES** | | **241,914** | **200,492** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *Constellation Energy Nuclear Group (CENG) from November 6, 2009;*
- *SPE from November 26, 2009.*

# Consolidated Cash Flow Statements

| *(in millions of Euros)* | Notes | 2009 (2) | 2008 (1) |
|---|---|---|---|
| **Operating activities:** | | | |
| **Income before tax from consolidated companies** | | **5,582** | **4,860** |
| Impairment | 17 | 66 | 115 |
| Accumulated depreciation and amortization, provisions and change in fair value | | 7,805 | 4,674 |
| Financial income and expenses | | 1,477 | 1,057 |
| Dividends received from companies accounted for under the equity method | | 143 | 110 |
| Capital gains/losses | | (569) | (245) |
| Change in working capital (3) | | (983) | (211) |
| **Net cash flow from operations** | | **13,521** | **10,360** |
| Net financial expenses disbursed | | (1,408) | (1,068) |
| Income taxes paid | | (963) | (1,720) |
| Cancellation of the decision of the European Commission | | 1,224 | - |
| **Net cash flow from operating activities** | | **12,374** | **7,572** |
| **Investing activities:** | | | |
| Acquisition / disposal of companies, net of cash (acquired / transferred) (4) | 7 | (13,160) | (281) |
| Purchases of property, plant and equipment and intangible assets | 22, 23, 24, 25 | (12,370) | (9,703) |
| Net proceeds from sale of property, plant and equipment and intangible assets | 22, 23, 24, 25 | 252 | 214 |
| Changes in financial assets | 27 | 334 | (6,895) |
| **Net cash flow used in investing activities** | | **(24,944)** | **(16,665)** |
| **Financing activities:** | | | |
| Issuance of borrowings | 39 | 30,228 | 15,717 |
| Repayment of borrowings | 39 | (15,486) | (4,882) |
| Dividends paid by parent company | 33.3 | (1,228) | (2,438) |
| Dividends paid to minority interests | | (83) | (90) |
| Capital increase subscribed by minority interests (5) | | - | 249 |
| Increase in special concession liabilities | 38 | 253 | 285 |
| Investment subsidies | | 214 | 150 |
| Treasury shares | | 12 | (180) |
| **Net cash flow from financing activities** | | **13,910** | **8,811** |
| **Net increase/(decrease) in cash and cash equivalents** | | **1,340** | **(282)** |
| **Cash and cash equivalents - opening balance** | | **5,869** | **6,035** |
| Effect of currency fluctuations | | (237) | (79) |
| Financial income on cash and cash equivalents | | 45 | 188 |
| Effect of other reclassifications | | (35) | 7 |
| **CASH AND CASH EQUIVALENTS – CLOSING BALANCE** | | **6,982** | **5,869** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Figures for 2009 include the effects of consolidation of:*
- *British Energy from January 5, 2009;*
- *Constellation Energy Nuclear Group (CENG) from November 6, 2009;*
- *SPE from November 26, 2009.*

*(3) In 2008, the change in working capital included reclassification of the amount due to AREVA for the La Hague reprocessing plant as a trade payable amounting to €2,300 million. In 2009 it includes a payment of part of this amount (€(605) million).*

*(4) The British Energy purchase offer and subsequent squeeze-out offer resulted in a £10,132 million payment (€10,827 million). At January 5, 2009, British Energy's cash and cash equivalents amounted to £1,224 million (€1,308 million).*
*Following acquisition of 49.99% of Constellation Energy Nuclear Group (CENG), an additional contribution of $3,502 million (€2,508 million) was made on November 6, 2009.*
*The other major operations of 2009 were the acquisitions by EnBW of a 26% interest in EWE, Lippendorf and Bexbach for approximately €1.4 billion, acquisition of 51% of SPE for €1,328 million and sale of a 20% share of Lake Acquisitions / British Energy to Centrica for £2,215 million (€2,470 million).*

*(5) Including EDF Énergies Nouvelles (€248 million in 2008).*

# Changes in Consolidated Equity

| *(in millions of Euros)* | Capital | Consolidated reserves and net income | Treasury shares | Translation adjustments | Impact of restatement to fair value of financial instruments | Equity (EDF share) | Minority interests | Total Equity |
|---|---|---|---|---|---|---|---|---|
| **Equity at 12.31.2007** | **911** | **24,266** | **(6)** | **(118)** | **2,157** | **27,210** | **1,586** | **28,796** |
| IAS 23 impacts | - | 51 | - | 2 | - | 53 | 9 | 62 |
| **Equity at January 1, 2008 restated (1)** | **911** | **24,317** | **(6)** | **(116)** | **2,157** | **27,263** | **1,595** | **28,858** |
| Gains and losses recorded directly in equity (2) | - | - | - | (1,528) | (3,546) | (5,074) | (67) | (5,141) |
| Net income | - | 3,484 | - | - | - | 3,484 | 144 | 3,628 |
| **Net income and gains and losses recorded directly in equity** | **-** | **3,484** | **-** | **(1,528)** | **(3,546)** | **(1,590)** | **77** | **(1,513)** |
| Dividends paid | - | (2,438) | - | - | - | (2,438) | (91) | (2,529) |
| Repurchase of treasury shares | - | - | (441) | - | - | (441) | - | (441) |
| Sales of treasury shares | - | - | 261 | - | - | 261 | - | 261 |
| Other changes (4) | - | 138 | - | 6 | (2) | 142 | 220 | 362 |
| **Equity at 12.31.2008 (1)** | **911** | **25,501** | **(186)** | **(1,638)** | **(1,391)** | **23,197** | **1,801** | **24,998** |
| Gains and losses recorded directly in equity (2) | - | - | - | 354 | 1,026 | 1,380 | 35 | 1,415 |
| Net income | - | 3,905 | - | - | - | 3,905 | 183 | 4,088 |
| **Net income and gains and losses recorded directly in equity** | **-** | **3,905** | **-** | **354** | **1,026** | **5,285** | **218** | **5,503** |
| Dividends paid (3) | - | (2,166) | - | - | - | (2,166) | (83) | (2,249) |
| Share capital increase (3) | 13 | 924 | - | - | - | 937 | - | 937 |
| Repurchase of treasury shares | - | - | (82) | - | - | (82) | - | (82) |
| Sales of treasury shares | - | - | 94 | - | - | 94 | - | 94 |
| Other changes (5) | - | 524 | 200 | (36) | (1) | 687 | 2,837 | 3,524 |
| **EQUITY AT 12.31.2009** | **924** | **28,688** | **26** | **(1,320)** | **(366)** | **27,952** | **4,773** | **32,725** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) These changes correspond to the effects of fair value measurement of available-for-sale assets and amounts transferred to income following changes in their fair value, and the effects of fair value measurement of hedging instruments and amounts transferred to income in respect of terminated contracts. For details see the statement of net income and gains and losses recorded directly in equity.*

*(3) Including interim dividends of € 1,002 million (€ 64 million in the form of cash payments and € 938 million in the form of newly-issued shares) and the balance of the 2008 dividend amounting to € 1,164 million.*

*(4) Other changes in consolidated equity in 2008 include € 248 million resulting from the capital increase by EDF Énergies Nouvelles, subscribed by minority shareholders.*

*(5) Changes in "consolidated reserves and net income" mainly result from the effect of cancellation of the European Commission decision (€ 889 million) and the 20% partial sale without loss of control of Lake Acquisitions / British Energy.*

*Changes in minority interests essentially concern Centrica's investment in Lake Acquisitions / British Energy.*

# Notes to the consolidated financial statements

Électricité de France (EDF or the "Company") is a French *société anonyme* governed by French law, and registered in France.

The Company's consolidated financial statements include the accounts of the Company and its subsidiaries, and the Group's share in the results of joint ventures and associates (all collectively referred to as the "Group").

The Group is an integrated energy company engaged in all aspects of the energy business: generation, transmission, distribution, supply and trading of energies.

The Group's consolidated financial statements at December 31, 2009 were prepared under the responsibility of the Board of Directors and approved by the directors at the Board meeting held on February 10, 2010. They will become final after approval at the general shareholders' meeting to be held on May 18, 2010.

## Note 1 Group accounting standards



## 1.1 Declaration of conformity and Group accounting policies

Pursuant to European regulation 1606/2002 of July 19, 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended December 31, 2009 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at December 31, 2009. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The consolidated financial statements for 2009 contain comparative information for the financial year 2008 after restatement for the effect of application IAS 23 (revised), "Borrowing costs" and changes in the presentation of Edison trading revenues.

# 1.2 Changes in accounting methods at January 1, 2009

The accounting and valuation methods applied by the Group in the consolidated financial statements for the year ended December 31, 2009 are identical to those used in the consolidated financial statements for the year ended December 31, 2008, with the exception of standards endorsed by the European Union in 2007, 2008 and 2009 that became mandatory from January 1, 2009.

This concerns the following standards, amendments and interpretations:

- revised IAS 1, "Presentation of financial statements"; in addition to the income statement, this standard requires disclosure of a "statement of net income and gains and losses recorded directly in equity". This statement details the unrealized gains and losses included in equity, such as changes in the fair value of available-for-sale financial assets, hedging instruments and translation adjustments. This information was previously shown in the table of changes in consolidated equity;
- revised IAS 23, "Borrowing costs", which no longer allows immediate expensing of borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset, and requires such costs to be capitalized as part of the cost of the asset. The impacts of this amendment are presented in note 2;
- IFRS 8, "Operating segments". This standard, which replaces IAS 14, requires the entity's segment reporting to be presented according to the operating segments which are regularly reviewed by management. Changes from the segment information as previously reported are presented in note 8;
- amendments to IFRS 1 and IAS 27 "Cost of an Investment in a Subsidiary, Jointly Controlled Entity or Associate";
- the amendment to IFRS 2, "Vesting conditions and cancellations";
- amendments to IAS 32 and IAS 1 entitled "Puttable financial instruments and obligations arising on liquidation";
- amendments to IFRS 7, "Improving Disclosures about Financial Instruments";
- amendments to IFRIC 9 and IAS 39, "Embedded Derivatives";
- amendments applicable as of January 1, 2009 as part of the annual improvements to IFRSs (2006-2008);
- IFRIC 13, "Customer Loyalty Programmes";
- IFRIC 14, "IAS 19 – The Limit on a Defined Benefit Asset, minimum funding requirements and their interaction".

IFRIC 11, "IFRS 2: Group and Treasury Share Transactions", was applied early by the Group as from December 31, 2007.

On September 10, 2009 the European Union adopted a new version of the amendment to IAS 39 and IFRS 7, "Reclassification of financial assets – Effective date and transition". The previous amendment had applied since July 1, 2008 without any impact on the EDF group financial statements. As the new amendment does not require companies that complied with the previous version to present new financial statements, the Group is unaffected by this new endorsement.

In accordance with article 2 of European Commission regulation EC 1164/2009 (November 27, 2009), the Group will apply IFRIC 18, "Transfers of Assets from Customers", from January 1, 2010, the start of the first financial year beginning after October 31, 2009. Upon first application, this interpretation is expected to have a positive impact of some €1.8 billion (net of taxes) on Group equity (see note 3.7).

The Group has decided against early application of standards endorsed by the European Union during 2009 but not yet mandatory:

- IAS 27, "Consolidated and Separate Financial Statements" as amended, and revised IFRS 3, "Business combinations": these standards, which were endorsed by the European Union on June 12, 2009, will apply to business combinations that take place in financial years starting on or after July 1, 2009 (*i.e.* from January 1, 2010 for the Group);
- IFRIC 12, "Service Concession Arrangements": the European Union adopted IFRIC 12 with the publication in its Official Journal of Commission Regulation (EC) No 254/2009 of March 25, 2009. This interpretation must be applied no later than the opening date of the first financial year that starts after the Regulation comes into force, which for EDF is January 1, 2010, as detailed in note 3.12.1 to the financial statements at December 31, 2009. The Group has carried out an analysis and currently considers that when the interpretation applies, its impact on the balance sheet and income statement will be limited;
- revised IFRS 1, "First-time Adoption of International Financial Reporting Standards", which was adopted by the European Union on November 26, 2009 and has no impact on the Group's financial statements;
- amendment to IAS 32, "Classification of rights issues", which was approved by the European Union on December 24, 2009. The potential impact is currently being evaluated;
- amendments to IAS 39 on "Eligible hedged items", which were adopted by the European Union on September 16, 2009 and applied to financial years starting on or after July 1, 2009 (*i.e.* from January 1, 2010 for EDF). The potential impact is currently being assessed;
- amendments to IFRS 5, « Non-current assets held for sale and discontinued operations » and IFRS 1, "First-time Adoption of International Financial Reporting Standards" described in the annual improvements (2006-2008) to international standards, which will be mandatory for financial years beginning on or after January 1, 2010;
- IFRIC 15, "Agreements for the Construction of Real Estate", approved by the European Union on July 23, 2009. This interpretation has no impact for the Group;
- IFRIC 16, "Hedges of a Net Investment in a Foreign Operation" adopted by the European Union on June 5, 2009: the potential impact of this interpretation is currently being evaluated;
- IFRIC 17, "Distributions of Non-cash Assets to Owners" adopted by the European Union on November 27, 2009: the potential impact of this interpretation is currently being evaluated.

Similarly, the Group has not opted for early application of the following standards, amendments and interpretation likely to be approved by the European Union in 2010 at the earliest:

- revised IAS 24, "Related party disclosures";
- annual improvements to IFRS (2007-2009);
- amendments to IFRS 1, "Additional exemptions for first-time adopters";
- amendment to IFRS 2, "Group cash-settled share-based payment transactions";
- amendments to IFRIC 14, "Prepayments of a minimum funding requirement";
- IFRIC 19, "Extinguishing financial liabilities with equity instruments".

Finally, as part of the ongoing overhaul of IAS 39, the IASB adopted a new standard in November 2009, IFRS 9, "Financial instruments" (Phase 1, Classification and Measurement). This standard has not yet been adopted by the EU, and in application of current regulations, cannot be applied early for the year ended December 31, 2009.

The potential impact of all of these standards, amendments and interpretations is still under assessment.

# Note 2 Comparability



### – Revised IAS 23, "Borrowing costs"

Revised IAS 23, "Borrowing costs", came into force on January 1, 2009. This standard, which leads to a change in accounting method, requires borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset to be capitalized as part of the costs of that asset. Other borrowing costs continue to be charged to financial expenses over the relevant period.

The Group has decided to apply this standard retroactively from January 1, 2005 to ensure consistent accounting treatment for its significant investments, in particular the Flamanville 3 EPR, for which the first expenses were recognized in 2005.

As a result of this retrospective application, comparative prior year information is presented.

The impact on the Group's share of equity is €53 million at January 1, 2008 and €139 million at December 31, 2008.

The impact at January 1, 2008 principally relates to the France segment (€27 million, principally for investments in the EPR).

### – Edison's trading activities

Edison developed its energy trading business during 2008. To comply with Group presentation rules, the corresponding revenues are reported net of purchases from 2009. Sales and fuel purchases for 2008 have consequently been restated, leading to a €432 million reduction.

# 2.1 Impact on the consolidated income statement for 2008

| *(in millions of Euros)* | 2008 as published | IAS 23 impacts | Netting Trading Edison | 2008 restated |
|---|---|---|---|---|
| Sales | 64,279 | - | (432) | 63,847 |
| Fuel and energy purchases | (27,022) | - | 432 | (26,590) |
| Other external expenses | (10,258) | - | - | (10,258) |
| Personnel expenses | (10,476) | - | - | (10,476) |
| Taxes other than income taxes | (3,171) | - | - | (3,171) |
| Other operating income and expenses | 2,083 | - | - | 2,083 |
| Prolongation of the transition tariff system (TaRTAM) – law of August 4, 2008 | (1,195) | - | - | (1,195) |
| **Operating profit before depreciation and amortization** | **14,240** | **-** | **-** | **14,240** |
| Net depreciation and amortization | (5,713) | (1) | - | (5,714) |
| Net increases in provisions for renewal of property, plant and equipment operated under concessions | (526) | - | - | (526) |
| (Impairment) / reversals | (115) | - | - | (115) |
| Other income and expenses | 25 | - | - | 25 |
| **Operating profit** | **7,911** | **(1)** | **-** | **7,910** |
| Cost of gross financial indebtedness | (1,657) | - | - | (1,657) |
| Discount expense | (2,797) | - | - | (2,797) |
| Other financial income and expenses | 1,287 | 117 | - | 1,404 |
| **Financial result** | **(3,167)** | **117** | **-** | **(3,050)** |
| **Income before taxes of consolidated companies** | **4,744** | **116** | **-** | **4,860** |
| Income taxes | (1,561) | (38) | - | (1,599) |
| Share in income of companies accounted for under the equity method | 352 | 15 | - | 367 |
| **Group net income** | **3,535** | **93** | **-** | **3,628** |
| Minority interests | 135 | 9 | - | 144 |
| **EDF NET INCOME** | **3,400** | **84** | **-** | **3,484** |

# 2.2 Impact on the consolidated balance sheet at December 31, 2008

## ASSETS

| *(in millions of Euros)* | 12.31.2008 as published | IAS 23 impacts and trading Edison | 12.31.2008 restated |
|---|---|---|---|
| Goodwill | 6,807 | - | 6,807 |
| Other intangible assets | 3,076 | 23 | 3,099 |
| Property, plant and equipment operated under French public electricity distribution concessions | 41,213 | - | 41,213 |
| Property, plant and equipment operated under concessions for other activities | 26,957 | 2 | 26,959 |
| Property, plant and equipment used in generation and other tangible assets owned by the Group (1) | 39,245 | 158 | 39,403 |
| Investments in companies accounted for under the equity method | 2,819 | 33 | 2,852 |
| Non-current financial assets | 18,103 | - | 18,103 |
| Deferred tax assets | 2,912 | (12) | 2,900 |
| **Non-current assets** | **141,132** | **204** | **141,336** |
| **Current assets** | **59,154** | **-** | **59,154** |
| **Assets classified as held for sale** | **2** | **-** | **2** |
| **TOTAL ASSETS** | **200,288** | **204** | **200,492** |

## EQUITY AND LIABILITIES

| *(in millions of Euros)* | 12.31.2008 as published | IAS 23 impacts and trading Edison | 12.31.2008 restated |
|---|---|---|---|
| Capital | 911 | - | 911 |
| EDF net income and consolidated reserves | 22,147 | 139 | 22,286 |
| **Equity (EDF share)** | **23,058** | **139** | **23,197** |
| Minority interests | 1,784 | 17 | 1,801 |
| **Total Equity** | **24,842** | **156** | **24,998** |
| **Non-current provisions** | **43,415** | **-** | **43,415** |
| Grantors' rights in existing assets operated under French public electricity distribution concessions | 19,025 | - | 19,025 |
| Grantors' rights in assets to be replaced operated under French public electricity distribution concessions | 19,491 | - | 19,491 |
| Non-current financial liabilities | 25,584 | - | 25,584 |
| Other liabilities | 5,628 | - | 5,628 |
| Deferred tax liabilities | 4,086 | 48 | 4,134 |
| **Non-current liabilities** | **117,229** | **48** | **117,277** |
| **Current liabilities** | **58,217** | **-** | **58,217** |
| **Liabilities related to assets classified as held for sale** | **-** | **-** | **-** |
| **TOTAL EQUITY AND LIABILITIES** | **200,288** | **204** | **200,492** |

(1) Breakdown of the impact of IAS 23:

| *(in millions of Euros)* | 12.31.2008 as published | IAS 23 impacts | 12.31.2008 restated |
|---|---|---|---|
| Property, plant and equipment owned by the Group | 33,547 | 33 | 33,580 |
| Property, plant and equipment in progress | 5,389 | 125 | 5,514 |
| Leased property, plant and equipment | 309 | - | 309 |
| **PROPERTY, PLANT AND EQUIPMENT USED IN GENERATION AND OTHER TANGIBLE ASSETS OWNED BY THE GROUP** | **39,245** | **158** | **39,403** |

# 2.3 Impact on the consolidated cash flow statement for 2008

| *(in millions of Euros)* | 2008 as published | IAS 23 impacts | 2008 restated |
|---|---|---|---|
| **Operating activities:** | | | |
| **Income before tax from consolidated companies** | **4,744** | **116** | **4,860** |
| Accumulated depreciation and amortization, provisions and change in fair value | 4,788 | 1 | 4,789 |
| Financial income and expenses | 1,174 | (117) | 1,057 |
| Dividends received from companies accounted for under the equity method | 110 | - | 110 |
| Capital gains/losses | (245) | - | (245) |
| Change in working capital | (211) | - | (211) |
| **Net cash flow from operations** | **10,360** | **-** | **10,360** |
| Net financial expenses disbursed | (1,068) | - | (1,068) |
| Income taxes paid | (1,720) | - | (1,720) |
| **Net cash flow from operating activities** | **7,572** | **-** | **7,572** |
| **Net cash flow used in investing activities** | **(16,665)** | **-** | **(16,665)** |
| **Net cash flow from financing activities** | **8,811** | **-** | **8,811** |
| **Net increase/(decrease) in cash and cash equivalents** | **(282)** | **-** | **(282)** |
| **Cash and cash equivalents - opening balance** | **6,035** | **-** | **6,035** |
| Effect of currency fluctuations | (79) | - | (79) |
| Financial income on cash and cash equivalents | 188 | - | 188 |
| Effect of other reclassifications | 7 | - | 7 |
| **CASH AND CASH EQUIVALENTS - CLOSING BALANCE** | **5,869** | **-** | **5,869** |

# Note 3 Summary of the principal accounting and valuation methods

The following accounting methods have been applied consistently through all the periods presented in the consolidated financial statements.

# 3.1 Valuation

The consolidated financial statements are based on historical cost valuation, with the exception of certain financial instruments and available-for-sale financial assets, which by convention are stated at fair value.

The methods used to determine the fair value of these instruments are presented in note 3.16.

# 3.2 Management judgment and estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, and positive and negative contingencies at year-end. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

The principal sensitive accounting methods involving use of estimates and judgments are described below. Given their importance in the EDF group's financial statements, the impact of any change in assumption in these areas could be significant.

## 3.2.1 Nuclear provisions

The measurement of provisions for the back-end of the nuclear cycle, decommissioning and last cores is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules. A revised estimate is therefore established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the Group. Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

A change in the discount rate would be considered as a change in estimate in the same way as a change in disbursement schedule or contractor's quote, and the impacts would be recognized as follows:

- in the corresponding assets if the provision was initially covered by balance sheet assets;
- in the income statement in all other cases.

Such a change could have a significant impact on the consolidated financial statements.

Sensitivity analyses are presented in note 35.2.3.2.

## 3.2.2 Pensions and other long-term and post-employment benefits

The value of pensions and other long-term and post-employment benefit obligations is based on actuarial valuations that are sensitive to assumptions concerning discount rates and wage increase rates, and all the actuarial assumptions used.

Sensitivity analyses are presented in note 36.4.

## 3.2.3 Impairment of goodwill and long-term assets

Impairment tests on goodwill and long-term assets are sensitive to the macro-economic and segment assumptions used, and medium-term financial forecasts. The Group therefore revises the underlying estimates and assumptions based on regularly updated information.

## 3.2.4 Financial instruments

In measuring the fair value of unlisted financial instruments (essentially energy contracts), the Group uses valuation models involving a certain number of assumptions subject to unforeseeable developments. Any change in those assumptions could have a significant impact on the financial statements.

### 3.2.5 Energy and delivery not yet metered

As explained in note 3.7, the quantities of energy delivered but neither measured nor billed are calculated at the reporting date based on consumption statistics and selling price estimates. These statistics and estimates are sensitive to the assumptions used in determining the portion of sales not billed at the closing date.

### 3.2.6 Valuation of obligations concerning French public distribution concession assets to be replaced

In view of the specific nature of French public electricity distribution concessions, the Group has opted to present its obligation to renew property, plant and equipment in the balance sheet at a value corresponding to the amount of contractual commitments as calculated and disclosed to the grantors in the annual business reports. An alternative approach would be to value the obligations based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life. The impacts this alternative approach would have had on the accounts are shown in note 3.24 for information. Whatever valuation method is used, measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of cost and disbursement dates.

### 3.2.7 Transition tariff system *(Tarif réglementé transitoire d'ajustement du marché* or *TaRTAM)*

To assess the contribution payable by the Group in application of the transition tariff defined in the French laws of December 7, 2006 and August 4, 2008, various assumptions have been used based on the best available information and forecasts, particularly regarding the numbers of customers applying to benefit from this tariff, developments in electricity market prices and the share of the compensation to be financed by the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* or CSPE) at each reporting date.

### 3.2.8 Other Management Judgments

The use of estimates and assumptions is also particularly important in measuring the amounts of the Contribution to the Public Electricity Service (CSPE) receivable for the year, and in the recognition of deferred tax assets.

Against the economic and financial crisis which continued in 2009 and was mainly characterized by a degree of volatility on the financial markets, the parameters used to prepare estimates are based on macro-economic assumptions appropriate to the very long-term cycle of Group assets. A sustained serious prolongation of this crisis could lead to revision of some of the long-term assumptions used in determining the value of assets and liabilities, and in assessment of positive and negative factors at the reporting date.

## 3.3 Consolidation methods

Subsidiaries are companies in which the Group has exclusive control and are fully consolidated. Exclusive control means the power to govern the enterprise's financial and operating policies either directly or indirectly so as to obtain benefit from its activities. Exclusive control is presumed when EDF directly or indirectly holds more than 50% of the voting rights. Voting rights that are potentially exercisable at the closing date, even by another party, are taken into consideration in determining the level of control over a subsidiary.

Joint ventures are companies that the Group jointly controls, and are proportionally consolidated on the basis of the Group's percentage interest. Joint control means sharing control over a company jointly operated by a limited number of partners or shareholders, such that the operating and financial policies result from their mutual agreement.

Associates are companies in which the Group exercises significant influence on the financial and operating policies without controlling the company. The Group is considered to exercise significant influence when it holds at least 20% of the consolidated company. Associates are accounted for under the equity method. They are carried in the balance sheet at historical cost adjusted for the share of net assets generated after acquisition, less any impairment. The Group's share in net income for the period is reported under the income statement heading "Share in income of companies accounted for under the equity method".

The results of companies acquired during the year are recognized in the Group's consolidated income statement from the date on which control is acquired, until control is transferred upon disposal.

All significant transactions between consolidated companies and unrealized internal profits are eliminated.

A list of subsidiaries, joint ventures and associates is presented in note 49.

# 3.4 Financial statement presentation rules

Assets and liabilities of dissimilar natures or functions are disclosed separately.

Assets and liabilities contributing to working capital used in the entity's normal operating cycle are classified as current. Other assets and liabilities are classified as current if they mature within one year of the closing date, and non-current if they mature more than one year after the closing date.

Commitments by an EDF group entity to purchase minority interests in a fully consolidated entity are reported under current or non-current "Other liabilities", with corresponding adjustments to goodwill and minority interests.

The income statement presents items by nature. The heading "Other income and expenses" presented below the operating profit before depreciation and amortization comprises items of an unusual nature or amount.

# 3.5 Translation methods

## 3.5.1 Reporting currency

The Group's financial statements are presented in Euros, which is both the functional and reporting currency of the EDF group. All financial data are rounded up or down to the nearest million.

## 3.5.2 Functional currency

An entity's functional currency is the currency of the economic environment in which it primarily operates. In most cases, the local currency is the functional currency, but for some entities, a functional currency other than the local currency may be used provided it reflects the currency used in the principal transactions.

## 3.5.3 Translation of the financial statements of foreign companies whose functional currency is not the Euro

The financial statements of foreign companies whose functional currency is not the Euro are translated as follows:

- balance sheets are translated into Euros at the closing rate;
- income statements and cash flows are translated at the average rate for the period;
- resulting differences are recognized in equity under the heading "Translation adjustments".

Currency translation differences affecting a monetary item that is an integral part of the Group's net investment in a consolidated foreign company are included in consolidated equity until the disposal or liquidation of the net investment, at which date they are recognized as income or expenses in the income statement, in the same way as other translation adjustments concerning the Company.

## 3.5.4 Translation of transactions in foreign currencies

In application of IAS 21, transactions expressed in foreign currencies are initially translated and recorded in the functional currency of the entity concerned, using the rate in force at the transaction date.

At each reporting date, monetary assets and liabilities expressed in foreign currencies are translated at the closing rate. The resulting foreign exchange differences are taken to the income statement.

## 3.6 Related parties

Related parties include the French State, companies in which the State holds majority ownership and certain of their subsidiaries, and companies in which EDF exercises joint control or significant influence. They also include members of the Group's management and governance bodies.

## 3.7 Sales

Sales essentially comprise income from the sale of energy and services, which mainly include energy transmission and distribution services, and capacity and interconnection auctions.

The Group accounts for sales when:
- a contract exists;
- delivery has taken place (or the service has been provided);
- a quantifiable price has been established or can be determined;
- and the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

Energy delivered but not yet measured or billed is calculated based on consumption statistics and selling price estimates.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at that date.

Energy trading operations are recognized net of purchases.

The financial contributions received from customers upon connection to the electricity network are mostly recorded as deferred income and transferred to sales over a period that depends on the useful life of the assets they contribute to finance, or the estimated term of customer contracts.

The Group will apply IFRIC 18 retrospectively from January 1, 2010 (see note 1.2). At that date, the Group entities EDF, ERDF, Électricité de Strasbourg, EDF Energy, Demasz and SSE, for which IFRIC 18 will entail a change of accounting method (discontinuation of deferral) will transfer their existing deferred income to equity. Connection income received from January 1, 2010 will be recorded in revenues for the year. RTE and EnBW will continue to defer such income due to the nature of their services associated with these contributions, and their tariff structure.

## 3.8 Income taxes

Income taxes include the current tax expense (income) and the deferred tax expense (income), calculated under the tax legislation in force in the countries where earnings are taxable.

Current and deferred taxes are recorded in the income statement, or in equity if they concern items directly allocated to equity.

The current tax expense (income) is the estimated amount of tax due on the taxable income for the period, calculated using the tax rates adopted at the year-end.

Deferred taxes result from temporary differences between the book value of assets and liabilities and their tax basis. No deferred taxes are recognized for temporary differences generated by:
- goodwill which is not tax deductible;
- the initial recognition of an asset or liability in a transaction which is not a business combination and does not affect the accounting profit or taxable profit (tax loss) at the transaction date;
- investments in subsidiaries, joint ventures and associates, when the Group controls the timing of reversal of the temporary differences, and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets and liabilities are valued at the expected tax rate for the period in which the asset will be realized or the liability settled, based on tax rates adopted at the year-end. If the tax rate changes, deferred taxes are adjusted to the new rate and the adjustment is recorded in the income statement, unless it relates to an underlying for which changes in value are recorded in equity, for example hedging instruments and available-for-sale financial assets.

Deferred taxes are reviewed at each closing date, to take into account changes in tax legislation and the prospects for recovery of deductible temporary differences. Deferred tax assets are only recognized when it is probable that the Group will have sufficient taxable profit to utilize the benefit of the asset in the foreseeable future, or beyond that horizon, if there are deferred tax liabilities with the same maturity.

# 3.9 Goodwill and business combinations

Business combinations are recognized under the purchase method defined in IFRS 3 as published in 2004. Purchase cost is the fair value of the assets transferred, liabilities incurred or assumed and equity instruments issued by the purchaser at the acquisition date, plus costs directly attributable to the purchase.

## 3.9.1 Determination of goodwill

Goodwill corresponds to the difference between the cost of a business combination and the Group's share in the fair value of the identifiable assets, liabilities and contingent liabilities of the company acquired on the date control is transferred. When the difference is negative, it is immediately included in the income statement.

The fair values of assets and liabilities and the resulting goodwill are finalized within 12 months of the acquisition.

If minority interests are acquired in an associate without full control resulting, the Group continues to carry the assets and liabilities acquired previously at the same value in the consolidated financial statements.

## 3.9.2 Measurement and presentation of goodwill

Goodwill on acquisition of subsidiaries or joint ventures is disclosed separately in the balance sheet. Impairment on this goodwill is reported under the heading "Impairments", in the income statement.

Goodwill on acquisition of associates is included in the investment's net book value. Impairment on this goodwill is included under the heading "Share in income of companies accounted for under the equity method".

After initial recognition, goodwill is carried at cost less any impairment recognized.

Goodwill is not amortized, but impairment tests are carried out as soon as there is an indication of possible loss of value, and at least annually, as described in note 3.15.

# 3.10 Other intangible assets

Other intangible assets mainly consist of software, patents and similar rights, operating rights, brands and development costs. These assets are amortized on a straight-line basis over their useful lives.

Other intangible assets also include purchased greenhouse gas emission rights, which are not amortized.

## 3.10.1 Research and Development expenses

Research expenses are recognized as expenses in the financial period incurred.

Development expenses are recognized as an intangible asset if the Group can demonstrate:

- the technical feasibility of making the intangible asset ready for commissioning or sale;

- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset;
- its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

### 3.10.2 Greenhouse gas emission rights

The Group applies the following treatment to greenhouse gas emission rights:

- purchased emission rights are recorded as intangible assets at acquisition cost; when they have been granted for nil consideration by the relevant State under the National Allocation Plan, they are not shown in the balance sheet;
- when a Group entity's actual emissions for the year are higher than the rights allocated by the State less completed transactions on the spot or forward markets for rights still held in respect of that year, a provision is recorded to cover the excess emissions. This provision is equivalent to the acquisition cost up to the amount of rights acquired on the spot or forward markets, and based on market prices for the balance.
  The provision is cancelled when rights are surrendered to the State.

Forward purchases and sales of rights carried out as part of trading activities are recorded in compliance with IAS 39 and stated at fair value at the balance sheet date. Changes in fair value are taken to the income statement.

### 3.10.3 Renewable energy certificates

When a Group electricity producer or supplier under an obligation to sell a determined quantity of renewable energy is not in a position to meet that obligation at year-end, the Group applies the following accounting treatment:

- energy savings certificates awarded to the entity are not recognized insofar as they do not exceed the level of the obligation;
- certificates purchased are included in intangible assets at cost;
- a provision is established equivalent to the shortfall at the reporting date, proportionally to the period concerned. The value of the provision is based on the acquisition price of certificates already purchased on the spot or forward markets, and the market price or penalty price for the balance. The provision is cancelled when certificates are surrendered to the State.

If the entity has no obligation to sell renewable energy, certificates received or purchased for resale are included in inventories.

## 3.11 Concession assets, generation assets and other property, plant and equipment

The Group's property, plant and equipment are reported under three balance sheet headings, as appropriate to the business and contractual circumstances of their use:

- property, plant and equipment operated under French public electricity distribution concessions;
- property, plant and equipment operated under concessions for other activities;
- property, plant and equipment used in generation and other tangible assets owned by the Group.

### 3.11.1 Initial measurement

Property, plant and equipment are recorded at acquisition or production cost.

The cost of facilities developed in-house includes all labor and materials costs, and all other production costs attributable to the construction cost of the asset.

The Group capitalizes safety expenses incurred as a result of legal and regulatory obligations sanctioning non-compliance by an administrative ban from operation.

The cost of property, plant and equipment also includes decommissioning costs for generation plants, and last core costs for nuclear facilities. These assets are associated with the provisions recorded to cover these obligations. At the date of commissioning, they are measured and recorded in the same way as the corresponding provision (see note 3.22). The following components are thus included in the balance sheet value of property, plant and equipment:

- the discounted cost of decommissioning the facilities;
- for nuclear facilities, the discounted cost of last core nuclear fuel, including depreciation of residual reactor fuel that will not be fully irradiated when production shuts down, the cost of nuclear fuel processing and the cost of removing and storing waste from these operations.

Strategic safety spare parts for nuclear facilities are treated as property, plant and equipment, and depreciated pro rata with the useful life of the facilities to which they are assigned.

When a part of an asset has a different useful life from the overall asset's useful life, it is identified as an asset component.

This component approach mainly concerns the costs of the regulatory ten-yearly services of nuclear plants, and major scheduled servicing costs which are amortized over a period corresponding to the time elapsing between two services. It also applies to certain parts which have their own specific useful life.

Borrowing costs incurred to finance installations are capitalized when they contribute directly to acquisition, construction or production of a qualifying asset (note 2).

## 3.11.2 Depreciation

Property, plant and equipment are depreciated on a straight-line basis over their useful life, defined as the period during which the Group expects to draw future economic benefits from their use.

The estimated useful lives for the principal facilities are the following:

- Hydroelectric dams: 75 years
- Electromechanical equipment used in hydropower plants: 50 years
- Fossil-fired plants: 30 to 45 years
- Nuclear power plants: 40 years*
- Transmission and distribution installations (lines, substations): 20 to 45 years
- Windfarm and photovoltaic facilities 20 to 25 years

# 3.12 Concession agreements

## 3.12.1 Accounting treatment

The EDF group records public/private agreements in compliance with standards and interpretations IAS 16, IAS 17, IAS 18, IAS 37, IFRS 6 and IFRIC 4 as appropriate to the specific features of those agreements.

IFRIC 12, "Service concession arrangements" was adopted by the European Union on March 25, 2009 and will be applied by the Group from January 1, 2010.

The Group has carried out an analysis and considers that application of IFRIC 12 will have only a limited impact on its balance sheet and income statement.

## 3.12.2 French concessions

In France, the Group is the operator for three types of public service concessions:

- public electricity distribution concessions in which the grantors are local authorities (municipalities or syndicated municipalities);
- hydropower concessions with the State as grantor;
- the public transmission network operated under concession from the State.

### 3.12.2.1 PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

#### GENERAL BACKGROUND

Since the enactment of the French law of April 8, 1946, EDF has by law been the sole operator for the main public distribution concessions in France.

The accounting treatment of concessions is based on the concession agreements, with particular reference to their special clauses. It takes into consideration the possibility that EDF may one day lose its status as the sole authorized State concession operator.

These contracts cover terms of between 20 and 30 years, and generally use standard concession rules deriving from the 1992 Framework Contract negotiated with the National Federation of Licensing Authorities (*Fédération Nationale des Collectivités Concédantes et Régies* – FNCCR) and approved by the public authorities.

#### RECOGNITION OF ASSETS AS PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

All assets used by EDF in public electricity distribution concessions in France, whether they are owned by the grantor or the operator, are reported together under a specific line in the balance sheet assets at acquisition cost or their estimated value at the transfer date when supplied by the grantor.

### 3.12.2.2 HYDROPOWER CONCESSIONS

Hydropower concessions in France follow standard rules approved by decree. Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc.) and, in the case of recently-renewed concessions, electricity generation and switching facilities.

Assets used in these concessions are recorded under "Property, plant and equipment operated under concessions for other activities" at acquisition cost. As a result of recent changes in the regulations following removal of the outgoing operator's preferential right when a concession is renewed, the Group has shortened the depreciation periods used for certain assets (see note 4.1)

* Subject to regulations applicable in certain countries.

### 3.12.2.3 FRENCH PUBLIC TRANSMISSION CONCESSION

Following enactment of the French law of February 10, 2000, the public electricity transmission network was operated by an independent entity within EDF. This service was then transferred to a fully-consolidated subsidiary named RTE EDF Transport with effect from January 1, 2005.

A new set of standard rules for the public transmission concession was approved by decree 2006-1731 of December 23, 2006. The amendment to the agreement of November 27, 1958 transferring the concession for the French public electricity transmission network to RTE EDF Transport was signed on October 30, 2008. The concession terminates on December 31, 2051.

The assets operated under this concession belong by law to RTE EDF Transport. They are recorded under "Property, plant and equipment operated under concessions for other activities".

## 3.12.3 Foreign concessions

The rules governing concessions outside France depend on the contracts and national legislations concerned. Assets operated under concession outside France are recorded under "Property, plant and equipment operated under concessions for other activities", with the exception of prospecting rights and expenses associated with discovery of mineral resources, which are classified as intangible assets. The principal countries concerned are:

**– United Kingdom**

EDF Energy owns public electricity distribution networks. It has a monopoly on the geographical area covered by its license, and the network can be sold at fair value. Licenses may be terminated in the event of breach of obligations, subject to 25 years' notice.

**– Germany**

The distribution networks operated under concession by EnBW belong to EnBW for the duration of the concession. In the event that the concession is not renewed, EnBW may transfer the network at fair value or at amortized replacement value.

**– Italy**

Edison operates hydrocarbon generation sites, gas storage sites, local gas distribution networks and hydropower generating plants under concessions. It owns all the assets except for some items of property, plant and equipment on the hydropower generation sites, such as pipes, which are transferable for nil consideration upon expiry of the concession.

Hydropower generation assets which will be returned for nil consideration at the end of the concession are depreciated over the duration of the concession.
Hydrocarbon generation sites are recorded in compliance with the rules applicable to the sector (see note 3.13).

Assets related to exploration and generation companies and Edison's hydrocarbon concessions are depreciated under the unit of production (UOP) method; expenses associated with discovery of specific mineral resources are amortized over the year.

# 3.13 Hydrocarbon prospecting, exploration and generation

The Group applies IFRS 6, "Exploration for and Evaluation of Mineral Resources".

Exploration costs and costs incurred in connection with geological surveys, exploratory testing, geological and geophysical mapping and exploratory drilling are recognized as intangible assets and fully amortized in the year they are incurred.

Development costs related to commercially viable mineral wells and production costs incurred to build facilities to extract and store hydrocarbons are recognized as "Property plant and equipment used in generation and other tangible assets owned by the Group" or "Property, plant and equipment operated under concessions for other activities" as appropriate.

They are amortized under the UOP ("Unit Of Production") method.

# 3.14 Leases

In the course of its business, the Group uses assets made available under lease contracts. These contracts are analyzed in the light of the situations described and indicators supplied in IAS 17 in order to determine whether they are finance leases or operating leases.

## 3.14.1 Finance leases

Lease agreements that effectively transfer virtually all the risks and benefits incident to ownership of the leased assets to the Group are classified as finance leases. The main criteria examined in determining whether virtually all the risks and benefits are transferred by an agreement are the following:

- the ratio of the duration of the lease to the leased assets' useful life;
- total discounted future payments as a ratio of the fair value of the financed asset;
- whether ownership is transferred at the end of the lease;
- whether the purchase option is attractive;
- the features specific to the leased asset.

Finance-leased assets are reported under the relevant asset headings, with recognition of a corresponding financial liability: they are depreciated over their useful life, or over the term of the corresponding lease agreement when this is shorter.

If the Group performs a sale and leaseback operation resulting in a finance lease agreement, this is recognized in accordance with the principles described above. If the transfer price is higher than the asset's book value, the surplus is deferred and recognized as income progressively over the term of the lease.

## 3.14.2 Operating leases

Lease agreements that do not qualify as finance leases are classified and recognized as operating leases.
Payments made in application of these agreements are included in expenses in the income statement.

## 3.14.3 Arrangements containing a lease

In compliance with interpretation IFRIC 4, the Group identifies agreements that convey the right to use an asset or group of specific assets to the purchaser although they do not have the legal form of a lease contract, as the purchaser in the arrangement benefits from a substantial share of the asset's production and payment is not dependent on production or market price.

Such arrangements are treated as leases, and analyzed with reference to IAS 17 for classification as either finance or operating leases.

# 3.15 Impairment of goodwill, intangible assets and property, plant and equipment

At the year-end and at each interim reporting date, the Group assesses whether there is any indication that any goodwill or asset could have been significantly impaired. If so, an impairment test is carried out as follows:

- the Group measures any long-term asset impairment by comparing the carrying value of these assets and goodwill, classified into Cash-generating units where necessary, and their recoverable amount.
  Cash-generating units (CGU) are groups of homogeneous assets that generate identifiable cash flows benefiting from synergies resulting from the acquisition. The Group's Cash-generating units comprise either subgroups or legal entities, broken down where necessary by activity (generation and supply, distribution, transmission, other). Goodwill is allocated to the Cash-generating units (CGU).

The recoverable value of these units is the higher of fair value net of disposal costs, and value in use. Value in use is determined with reference to discounted future net cash flows based on medium-term financial projections. When this recoverable value is lower than the carrying amount in the balance sheet, an amount equal to the difference is booked under the heading "Impairment". The loss is allocated first to goodwill, and any surplus to the other assets of the Cash-generating unit concerned;

- the discount rates used for these purposes are based on the weighted average cost of capital for each asset or group of assets concerned, determined by economic and geographical area and by business segment where appropriate. The pre-tax discount rate is calculated using an iterative process based on after-tax rates;
- future cash flows are based on medium-term plan projections over three years and assumptions validated by the Group. Variables that can significantly affect the calculations are:
  - changes in tariff regulations and market prices,
  - changes in interest rates and market risk premiums,
  - market price levels and market share on supplies, and the level of investment,
  - the useful lives of facilities, and the plan for concession renewal,
  - the growth rates used beyond the medium-term plans and the terminal values taken into consideration;
- the fair value net of disposal costs is measured on the basis of multiples observed for the most recent transactions in the relevant sector.

Impairment of goodwill is irreversible.

# 3.16 Financial assets and liabilities

Financial assets include available-for-sale assets (non-consolidated investments, dedicated assets, and other investment securities), loans and receivables at amortized cost, including trade receivables, and the positive fair value of financial derivatives.

Dedicated assets are financial assets intended to finance the back-end of the nuclear cycle, for which provisions have been accrued (see note 27.3.2.1 and 35.2.3). These assets are managed separately from the Group's other financial assets and investments in view of their specific objective, and comprise bonds, equities, collective investment funds and "reserved" funds built up by the Group solely for its own use.

Financial liabilities comprise financial borrowings and debts, trade payables, bank credit and the negative fair value of financial derivatives.

Financial assets and liabilities are recorded in the balance sheet as current if they mature within one year and non-current if they mature after one year, apart from derivatives held for trading, which are all classified as current.

Operating debts and receivables, and cash and cash equivalents, are governed by IAS 39 and reported separately in the balance sheet.

## 3.16.1 Classification and valuation methods for financial assets and liabilities

Financial instruments are classified as follows under IFRS 7:
- financial assets and liabilities carried at fair value with changes in fair value included in income;
- held-to-maturity financial assets;
- loans and financial receivables;
- available-for-sale financial assets;
- trade receivables;
- cash and cash equivalents;
- financial debts and operating debts;
- financial derivatives.

### 3.16.1.1 FINANCIAL ASSETS AND LIABILITIES CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME

Financial assets carried at fair value with changes in fair value included in the income statement are classified as such at the inception of the operation. This applies to:
- assets acquired from the outset with the intention of resale in the short term;
- or derivatives not classified as hedges (derivatives held for trading);
- or assets the Group has elected to include in this category under the option allowed by IAS 39.

These assets are recorded at the transaction date, at acquisition cost including purchasing expenses. At each subsequent reporting date they are measured at fair value, based on quoted prices available from external sources for listed instruments, or using recognized valuation techniques such as the discounted cash flow method or reference to external sources for other instruments.

Changes in fair value other than those concerning commodity contracts are recorded in the income statement under the heading "Other financial income and expenses".

Dividends and interest received on assets stated at fair value are recorded in the income statement under "Other financial income".

Changes in the fair value of commodity trading contracts are recorded in the income statement under "Sales".

Changes in the fair value of other commodity contracts designated as derivatives are classified either as "Sales" or "Fuel and energy purchases" depending on the nature of the underlying or the risk hedged.

Regarding the fair value option, the Group classifies an asset or liability as "at fair value through profit or loss" in the three following circumstances:
- when using fair value eliminates or significantly reduces an inconsistency in the measurement of assets and liabilities ("accounting mismatch");
- when the performance of a group of financial assets or financial liabilities is managed on a fair value basis, in accordance with documented strategies and the management reporting system;

- if a contract contains one or more embedded derivatives, then the hybrid instrument may be valued under the fair value option unless:
  - the embedded derivative does not substantially affect the cash flows of the contract,
  - the analysis of the host contract and the embedded derivative does not lead to separate measurement of the embedded derivative.

### 3.16.1.2 HELD-TO-MATURITY FINANCIAL ASSETS

This category covers fixed-term investments which the Group acquires with the intent and ability to hold to maturity. They are recorded at amortized cost at the transaction date. Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

### 3.16.1.3 LOANS AND FINANCIAL RECEIVABLES

Loans and financial receivables are valued and recorded at the transaction date, at amortized cost less any impairment or provision.

Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

### 3.16.1.4 AVAILABLE-FOR-SALE FINANCIAL ASSETS

Available-for-sale financial assets comprise non-consolidated investments, dedicated assets, reserved funds and investment securities.

Dedicated assets held for a long or very long-term horizon are by default classified in this category.

Available-for-sale financial assets are recorded at acquisition cost at the transaction date, and adjusted to fair value at the reporting date.

Fair value measurement is based on quoted prices and market data available from external sources for instruments listed on an active market, and on the discounted cash flow method for other financial instruments. When a fair value cannot be reliably estimated by other accepted valuation methods such as discounting future cash flows, these instruments are valued at acquisition cost less any accumulated impairment.

Unrealized gains or losses on these assets are recorded in equity, unless there is evidence of a realized loss, in which case impairment is recognized in the income statement (see note 3.16.2).

For available-for-sale financial assets represented by debt securities, interest is calculated at the effective interest rate and credited to the income statement under the heading "Other financial income and expenses".

### 3.16.1.5 FINANCIAL DEBTS AND OPERATING DEBTS

Financial debts are recorded at amortized cost, with separate reporting of embedded derivatives where applicable. Interest is calculated at the effective interest rate and recorded under the heading "Cost of gross financial indebtedness" over the duration of the financial debt. The fair value of the debt is calculated by discounting future cash flows at market rates.

### 3.16.1.6 DERIVATIVES

#### 3.16.1.6.1 SCOPE

The scope of derivatives applied by the Group corresponds to the principles set out in IAS 39.

In particular, forward purchases and sales for physical delivery of energy or commodities are considered to fall outside the scope of application of IAS 39 when the contract concerned is considered to have been entered into as part of the Group's normal business activity. This is demonstrated to be the case when all the following conditions are fulfilled:

- a physical delivery takes place under all such contracts;
- the volumes purchased or sold under the contracts correspond to the Group's operating requirements;
- the contracts cannot be considered as options as defined by the standard. In the specific case of electricity sale contracts, the contract is equivalent to a firm forward sale or can be considered as a capacity sale.

The Group thus considers that transactions negotiated with a view to balancing the volumes between electricity purchase and sale commitments are part of its business as an integrated electricity company, and do not therefore come under the scope of IAS 39.

In compliance with IAS 39, the Group analyses all its contracts, of both a financial and non-financial nature, to identify the existence of any "embedded" derivatives. Any component of a contract that affects the cash flows of that contract in the same way as a stand-alone derivative corresponds to the definition of an embedded derivative.

If they meet the conditions set out by IAS 39, embedded derivatives are accounted for separately from the host contract at inception date.

#### 3.16.1.6.2 MEASUREMENT AND RECOGNITION

Derivatives are initially recorded at fair value, based on quoted prices and market data available from external sources. If no quoted prices are available, the Group may refer to recent comparable transactions or if no such transactions exist base its valuation on internal models that are recognized by market participants, giving priority to information directly derived from observable data, such as over-the-counter listings.

Changes in the fair value of these derivatives are recorded in the income statement, unless they are classified as hedges for a cash flow or net investment. Changes in the fair value of such hedging instruments are recorded directly in equity, excluding the ineffective portion of the hedge. In the specific case of financial instruments entered into as part of EDF Trading's business, realized and unrealized gains and losses are reported net under the heading "Sales".

Financial instruments stated at fair value are classified in the following categories:

- Level 1 (quoted prices): financial instruments listed on an active market;
- Level 2 (observable data): financial instruments valued using valuation techniques based on observable parameters;
- Level 3 (internal model): financial instruments valued using valuation techniques based wholly or partly on non-observable parameters.

#### 3.16.1.6.3 FINANCIAL INSTRUMENTS CLASSIFIED AS HEDGES

The EDF group uses derivative instruments to hedge its foreign exchange and interest rate risks, as well as risks related to certain commodity contracts.

The Group applies the criteria defined by IAS 39 in classifying derivatives as hedges:
- the instrument must hedge changes in fair value or cash flows attributable to the risk hedged, and the effectiveness of the hedge (*i.e.* the degree to which changes in the value of the hedging instrument offset changes in the value of the hedged item or future transaction) must be between 80% and 125%;
- in the case of cash flow hedges, the future transaction being hedged must be highly probable;
- reliable measurement of the effectiveness of the hedge must be possible;
- the hedge must be supported by appropriate documentation from its inception.

The hedging relationship ends when:
- a derivative instrument ceases to be an effective hedging instrument;
- a derivative instrument expires, or is sold, terminated or exercised;
- the hedged item expires, is sold or redeemed;
- a future transaction ceases to be considered as highly probable.

Only derivative instruments external to the Group qualify for hedge accounting, and gains or losses on internal derivatives are eliminated in the consolidated financial statements. However, in a cash flow hedging relationship initiated *via* derivatives internal to the Group, hedge accounting is applied if it can be demonstrated that the internal derivatives are matched with similar transactions external to the Group.

The Group uses the following categories for hedges:

**_(A)_ Fair value hedges**

These instruments hedge the exposure to changes in the fair value of an asset or liability recorded in the balance sheet, or a firm commitment to purchase or sell an asset. Changes in the fair value of the hedged item attributable to the hedged component of that item are recorded in the income statement and offset by corresponding variations in the fair value of the hedging instrument. Only the ineffective portion of the hedge has an impact on income.

**_(B)_ Cash flow hedges**

These instruments hedge highly probable future transactions: the variability in cash flows generated by the hedged transaction is offset by changes in the value of the hedging instrument.

The effective portion of accumulated changes in the hedge's fair value is recorded in equity, and the ineffective portion (*i.e.* changes in the fair value of the hedging instrument in excess of changes in the fair value of the hedged item) is recorded in the income statement.

When the hedged cash flows materialize, the amounts previously recognized in equity are transferred to the income statement in the same way as for the hedged item.

**_(C)_ Hedges of a net investment**

These instruments hedge exposure to the foreign exchange risk related to a net investment in a foreign entity. The effective portion of accumulated changes in the hedge's fair value is recorded in equity until disposal of the net investment, when it is included in the gain or loss on disposal. The ineffective portion (defined in the same way as for cash flow hedges) is recorded directly in the income statement.

The Group records the change in fair value resulting from the interest rate effect of derivatives hedging a net investment in a foreign operation in equity in the same way as the change in value resulting from foreign exchange differences.

## 3.16.2 Impairment of financial assets

At the year-end and at each interim reporting date, the Group assesses whether there is any objective evidence that an asset could have been significantly impaired. If so, the Group estimates the asset's recoverable value and records any necessary impairment as appropriate for the category of asset concerned.

### 3.16.2.1 FINANCIAL ASSETS RECORDED AT AMORTIZED COST

Impairment is equal to the difference between the asset's net book value and the discounted value of expected future cash flows, using the original effective interest rate of the financial instrument. The impairment is included in the income statement under the heading "Other financial expenses". If the impairment loss decreases in a subsequent period, the amount of the decrease is reversed and transferred to the income statement.

### 3.16.2.2 AVAILABLE-FOR-SALE FINANCIAL ASSETS

If there is a large or long-term decrease in the fair value of available-for-sale financial assets, the unrealized loss is reclassified from equity to income. For debt instruments, impairment is only recorded in the income statement when there is evidence of impairment related to the counterparty. If, in a subsequent period, the fair value of an available-for-sale financial asset increases, the increase in value is recorded in equity for equity instruments, while for debt instruments the impairment previously recorded is reversed and transferred to the income statement.

Different criteria for impairment apply to different types of available-for-sale financial assets.
In particular, the Group applies specific impairment criteria for the portion of the portfolio consisting of dedicated assets held to cover long-term expenses for decommissioning of nuclear plants and the back-end nuclear cycle for EDF, taking into consideration the legal and regulatory obligations attached to the funds, payment schedules and long-term fund management.

## 3.16.3 Derecognition of financial assets and liabilities

Derecognition is applied for all or part of:
- a financial asset, when the contractual rights making up the asset expire, or the Group substantially transfers most of the significant risks associated with ownership of the asset;
- a financial liability, when the liability is extinguished due to cancellation or expiry of the obligation. When a debt is renegotiated with a lender giving rise to substantially different terms, a new liability is recognized.

## 3.16.4 Securitization operations

When it can be demonstrated that the Group does not control the investment funds resulting from securitization operations, these are excluded from the scope of consolidation. Otherwise, an entry corresponding to the cash inflow is recorded under the heading "Other liabilities".

# 3.17 Inventories and work-in-process

Inventories are recognized at the lower of acquisition cost or net realizable value, except for inventories resulting from trading activities, which are carried at market value. The cost of inventories is determined by the weighted average unit cost method.

Cost includes all direct material costs, labor costs, and a share of indirect production costs.

## 3.17.1 Nuclear fuel and materials

Inventories of nuclear fuel and materials comprise fissile materials in various stages of production, and fuel in the reactor and stored. The processing cycle for nuclear fuels is longer than one year.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labor and subcontracted services (*e.g.* fluoration, enrichment, etc.).

These items are valued using the weighted average cost method, applied to each component (natural uranium, fluoration, enrichment, production).

In keeping with the notion of "loaded fuel" as defined in the decision of March 21, 2007, in France, the cost of inventories for fuel in reactors but not yet irradiated includes expenses for spent fuel management and long-term radioactive waste management. The corresponding amounts are taken into account in the relevant provisions.

Interest expenses incurred in financing inventories of nuclear fuels are charged to expenses for the period.

Nuclear materials, whatever their form during the processing cycle, whose useful lives are longer than one year, and nuclear fuel, whether being used in the reactors or stored, are recorded in inventories.

The Group does not value the uranium obtained from reprocessed fuel, due to uncertainty over its future use.

Nuclear fuel consumption is determined for each component based on forecasts of quantities used per kWh produced. These quantities are valued at weighted average cost of inventories.
Inventories are periodically corrected in view of forecast burnt quantities based on neutronic measurements.

## 3.17.2 Consumables, materials and spare parts

Inventories are valued at weighted average cost including direct and indirect purchasing costs.
Provisions concerning spare parts supplied under a maintenance program are based on the turnover of these parts and the useful lives of generation units.

## 3.17.3 Renewable energy certificates

Renewable energy certificates awarded to or purchased by an entity are included in "Other inventories" when they are not to be surrendered to the State in execution of a regulatory obligation.

# 3.18 Trade receivables

On initial recognition, trade receivables are stated at the fair value of the consideration received or to be received. A provision is recorded when their carrying amount, based on the probability of recovery assessed according to the type of receivable, is less than their book value. Depending on the nature of the receivable, the risk associated with doubtful receivables is assessed individually or by experience-based statistical methods.

Trade receivables also include revenue based on an estimate of power already delivered but neither measured nor billed. A provision is booked to cover the potential risk of subsequent non-recovery.

# 3.19 Cash and cash equivalents

Cash and cash equivalents comprise very liquid assets and very short-term investments, usually maturing within three months or less of the acquisition date, and with negligible risk of fluctuation in value.

Securities held short-term and classified as cash equivalents are recorded at fair value, with changes in fair value included in the heading "Financial income on cash and cash equivalents".

# 3.20 Equity

## 3.20.1 Restatement to fair value of financial instruments

The impact of restatement to fair value of financial instruments results from the adjustment to fair value of available-for-sale financial assets and certain hedging instruments.

## 3.20.2 Share issue expenses

Share issue expenses correspond exclusively to external costs expressly related to the capital increase. They are charged against the issue premium at their net-of-tax value.

Other expenses are classified as expenses of the period.

# 3.21 Treasury shares

Treasury shares are shares issued by the consolidating company and held either by that company or by other entities in the consolidated group.

They are valued at acquisition cost and deducted from equity until the date of disposal. Income or losses on disposals of treasury shares are directly included in equity and do not affect net income.

# 3.22 Provisions

The Group recognizes provisions if the following three conditions are met:
- the Group has a present obligation (legal or constructive) towards a third party that arises from a past event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the obligation amount can be estimated reliably.

In extremely rare cases when disclosing information could cause serious prejudice to the Group, description of a specific obligation, risk or litigation covered by a provision may be excluded from the notes to the financial statements.

Provisions are determined based on the Group's estimate of the expected cost necessary to settle the obligation. Estimates are based on management

data from the information system, assumptions adopted by the Group, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

If it is anticipated that all or part of the expenses covered by a provision will be reimbursed, the reimbursement is recognized under receivables if and only if the Group is virtually certain of receiving it.

It may occasionally happen that a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources.

Provisions mainly cover the following:

- back-end nuclear cycle expenses: provisions for spent fuel management and long-term radioactive waste management are booked for all fuel currently in use (in France, the provision concerns all fuel in reactors, regardless of the extent of irradiation; it also covers management expenses for radioactive waste resulting from decommissioning of nuclear plants);
- costs for decommissioning power plants and losses relating to fuel in the reactor when the reactor is shut down (provision for last cores);
- future losses relating to multi-year agreements for the purchase and sale of energy:
  - losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast market price for electricity,
  - losses on energy sale agreements are measured by comparing the estimated income under the contractual terms with the cost of generating the energy to be supplied.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and future losses relating to multi-year energy purchase and sale agreements are estimated by applying a forecast long-term inflation index to the projected disbursements, which are then discounted at rates that reflect the best estimate of a long-term rate of return on bond markets.

The rate of inflation and the discount rate are based on the economic parameters of the country where the economic entity is located.

For France, the Group applies a discount rate determined based on long series data for a sample of bonds, and takes into account the fact that some expenses covered by provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The discount effect generated at each closing to reflect the passage of time is recorded under "Discount expense" in financial expenses.

The impact of changes in estimates for long-term provisions with associated balance sheet assets, whether due to schedule changes, discount rate changes, new expense estimates or technological developments, is allocated to the relevant assets, with any excess allocated to the underlying asset (power plant). Each one of these parameters, taken singly or together, could have a considerable impact on the estimates over time.

# 3.23 Provisions for employee benefits

EDF group employees are entitled to benefits both during and after their employment, depending on local regulations and certain specific rules such as the statutory regulations for companies governed by the special pension system for the electricity and gas sector (IEG) in France.

## 3.23.1 Pension and post-employment benefit obligations

When they retire, Group employees benefit from pensions determined under local rules. They may also be entitled to benefits directly paid by the companies, and additional benefits prescribed by the relevant regulations.

All the obligations of EDF and the French subsidiaries governed by the Electricity and Gas sector (IEG) regime are described in note 36.2.2.

## 3.23.2 Other long-term benefit obligations

These benefits concern employees currently in service, and are earned according to local regulations, particularly the statutory regulations for the electricity and gas sector for EDF and French subsidiaries covered by the IEG regime. Details are provided in note 36.3.

## 3.23.3 Calculation and recognition of employee benefits

Obligations under defined-benefit plans are calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end to pensions, post-employment benefits and long-term benefits, taking into consideration each country's specific economic conditions and expected wage increases.

In calculating pensions and other post-employment benefit obligations, this method takes the following factors into consideration:

- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- retirement age, determined on the basis of relevant factors (such as years of service and number of children);
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data available in each country;
- reversion pensions, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate observed for the population of employees in the electricity and gas sector;
- a discount rate that depends on the geographical zone and the duration of the obligations; in compliance with IAS 19, this rate is determined as the market yield on high-quality corporate bonds or the year-end rate on Government bonds with a similar duration to EDF's commitments.

The provision takes into account the value of the fund assets that cover the pension obligations, which are deducted from the value of the obligation as determined above.

Any actuarial gains or losses on pensions and post-employment benefit obligations in excess of 10% (the "corridor") of the obligations or fund assets, whichever is the higher, are recognized in the income statement progressively over the average residual working life of the Company's employees.

Provisions for other long-term benefits directly include actuarial variances, mainly caused by changes in discount rates, and the past service cost, without application of the "corridor" rule.

The expense booked for employee benefit obligations includes:

- the cost of additional vested benefits, and the financial discount cost of existing benefits;
- the income corresponding to the expected return on fund assets;
- the income or expenses resulting from amortization of actuarial gains or losses;
- the income or expenses related to changes in the benefit systems or introduction of new systems.

### 3.23.4 Share-based payments

Under existing legislation in France, employees of a French group may benefit from attribution of shares. When the State sells some of the capital of a public company, article 11 of the French privatization law of 1986 and article 26 of the law of August 9, 2004 require a share offer to be reserved for current and retired employees of the Company. The Company being privatized may also set up free share plans.

In the light of IFRS 2, these benefits granted to employees – and former employees – must be treated by the Company as personnel expenses in the same way as additional remuneration, and recognized as such with a corresponding adjustment in equity.

Valuation of the benefit granted through a share offer reserved for current and retired employees is based on the difference between the share subscription price and the share price at the grant date, with actuarial valuation of the impact, if any, of the payment terms, the minimum holding period, and the fact that no dividends were received during the vesting period for the free shares.

In the case of free shares, the value of the benefit is based on the share price at the grant date, depending on the number of shares granted and the fact that no dividends were received during the vesting period. The expense is spread over the vesting period.

## 3.24 Special concession liabilities

These liabilities relate to public electricity distribution concessions in France.

These liabilities represent the contractual obligations specific to the concession rules. Since January 1, 2007, they have been recognized in the liabilities as:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities – the net book value of assets operated under concession – less any as yet unamortized financing provided by the operator;
- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement. These non-financial liabilities comprise:
  - depreciation recorded on the portion of assets financed by the grantor,
  - the provision for renewal, exclusively for assets due for renewal before the end of the concession.

When assets are replaced, the provision and amortization of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

In general, the value of special concession liabilities is determined as follows:

- the grantor's rights in existing assets, representing the share deemed to be held by the grantor in the concession assets, are valued on the basis of the assets recorded in the balance sheet;

- the obligations relating to assets to be replaced are valued on the basis of the estimated value of the relevant assets, measured at each year-end taking into consideration wear and tear on the asset at that date:
  - based on the difference between the asset's replacement value as assessed at year-end and the historical cost for calculation of the provision for renewal. Annual allocations to the provision are based on this difference, less any existing provisions, with the net amount spread over the residual useful life of the assets. Consequently, the expenses recognized for a given item increase over time,
  - based on the share of the asset's historical cost financed by the grantor, for amortization of the grantor's financing.

The valuation of these liabilities is subject to uncertainty in terms of cost and disbursement dates, among other factors.

The Group considers that the obligations related to assets to be replaced are to be valued on the basis of the special clauses contained in the concession agreements. Under this approach, these obligations are stated at the value of the contractual obligations as calculated and reported annually in the reports to the grantors.

If no such clauses existed, an alternative approach would be to state contractual obligations at the discounted value of future payments required for replacement of assets operated under concession at the end of their industrial useful life.

For information, the Group reports below the impacts of this alternative approach, *i.e.* the discounting of the future obligation to contribute to financing of assets to be replaced.

The principal assumptions used in preparing this simulation are as follows:
- the basis for calculation of the provision for renewal is the estimated replacement value at the end of the asset's useful life, applying a forecast annual inflation rate of 2%, less the asset's historical value. This amount is based on the wear and tear on the asset and discounted at a rate of 5%, based on an average duration of 8 years;
- amortization of the grantor's financing is also discounted at the rate of 5%.

The following table shows the impacts of this discounting for EDF and ERDF in 2009:

**– Impact on the income statement**

| *(in millions of Euros)* | **2009** |
|---|---|
| Operating profit | 670 |
| Financial result | (580) |
| Income before taxes | 90 |

**– Impact on the balance sheet – equity**

| *(in million of Euros and before taxes)* | **2009** |
|---|---|
| At opening date | 2,240 |
| At closing date | 2,330 |

Valuation of concession liabilities under this method is subject to uncertainty in terms of cost and disbursements, and is also sensitive to changes in inflation and discount rates.

## 3.25 Investment subsidies

Investment subsidies received by Group companies are included in liabilities under the heading "Other liabilities" and transferred to income as and when the economic benefits of the corresponding assets are utilized.

## 3.26 Environmental expenses

Environmental expenses are identifiable, additional expenses incurred to prevent, reduce or repair damage to the environment that has been or may be caused by the Group as a result of its business. These expenses are recorded under three headings:
- they are capitalized if they are incurred to prevent or reduce future damage or preserve resources;
- they are booked as environmental liabilities and as allocations to provisions for environmental risks if they correspond to an obligation that exists at the year-end and it is probable or certain at the reporting date that they will lead to an outflow of resources to the benefit of a third party, with no equivalent or greater benefit expected from that party subsequent to the year-end;
- they are recognized as expenses if they are operating expenses for the bodies in charge of environmental concerns, environmental supervision, environmental duties and taxes, processing of liquid and gas effluents and non-radioactive waste, or research unrelated to an investment.

## 3.27 Basic and diluted earnings per share

Earnings per share is calculated by dividing the Group's share of net income by the weighted average number of shares outstanding over the period. This weighted average number of shares outstanding is the number of ordinary shares at the start of the year, adjusted by the number of shares redeemed or issued during the year.

This number, and the earnings per share, is adjusted whenever necessary to reflect the impact of translation or exercise of dilutive potential shares (options, subscription warrants and convertible bonds issued, etc.).

## 3.28 Held-for-sale assets and liabilities and discontinued operations

Assets and liabilities held for sale are disclosed separately from other assets and liabilities in the balance sheet. All income from discontinued operations is disclosed in a single net amount after taxes in the income statement.

# Note 4 Regulatory events in France in 2009



## 4.1 Hydropower concessions

Article 7 of French law of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the French law of December 30, 2006, amending the 2006 finance law, sets out the principle of an indemnity for the outgoing operator in respect of the unamortized portion of investments made during the second half of the agreement (the final 10 years at least), with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree of September 26, 2008 clarified the terms of indemnification for work carried out prior to its publication during the second half of the concession. As required by this decree, EDF submitted a statement of the relevant expenses to the ministry of Ecology, Energy, Sustainable Development and the Sea, for approval early in 2009, and its claim is currently being processed by the administration.

In view of these changes in regulations, additional depreciation has been booked since January 1, 2009 for facilities that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term.

This has led to an additional € 14 million expense for 2009.

## 4.2 French laws on urban solidarity and renewal – town planning and habitat

The implementation provisions for the sections of the French solidarity and urban renewal law (*SRU – Solidarité Renouvellement Urbains*) and town planning and habitat law (*UH – Urbanisme et Habitat*) concerning connection to the public electricity distribution network introduced a new system applicable from January 1, 2009, with the following main features:

- definition of connection operations, separating network extension from network connection, with clear identification of the beneficiaries (local authorities in charge of town planning and connected customers);
- establishment of a single price scale for all connection operations (the price scale was approved by the French energy regulator (*CRE – Commission de Régulation de l'Énergie*) on March 27, 2008;
- direct inclusion of part of the connection price in the delivery tariff, using a reduction rate applicable to the basic price scale (these rates are set in the decision of July 17, 2008);
- the portion invoiced to beneficiaries is now named "contribution" and replaces the previous systems of connection fees, participations and assets contributed for no consideration by fitters. Contributions are treated as sales for the period concerned.

# Note 5 Major external growth operations



## 5.1 British Energy

### 5.1.1 Takeover of British Energy

On January 5, 2009, on completion of the purchase offer made on November 5, 2008 by Lake Acquisitions Ltd., a wholly-owned EDF group subsidiary, the EDF group took control of British Energy.

At that date, Lake Acquisitions held or had received valid acceptances for 1,550,102,522 shares in British Energy, representing 96.44% of British Energy's issued share capital.

Also on January 5, 2009 British Energy submitted an application to the UK market authorities for the cancellation of listing of British Energy shares. This cancellation took effect on February 3, 2009.

On January 12, 2009, Lake Acquisitions announced the posting of compulsory acquisition notices to British Energy shareholders who had not yet accepted the offers. British Energy shareholders had until February 23, 2009 to accept the initial offers, after which their shares were acquired by Lake Acquisitions under the terms of the compulsory acquisition notice.

Following completion of these operations, Lake Acquisitions thus holds 1,611,519,535 shares, representing all the share capital of British Energy except for the Special Share held by the UK Government.

## 5.1.2 Acquisition price

The acquisition cost for British Energy including the 26.5% purchased in September 2008 amounts to £12,611 million, the equivalent of €13,476 million based on the exchange rate in force at the date control was acquired (January 5, 2009: £1 = €1.0686), comprising:

- a cash payment of £12,180 million (€13,016 million);
- issuance of 389,982,701 CVR-linked Nuclear Power Notes maturing in 2019 under the alternative offer to previous British Energy shareholders, limited to 32.28% of the total number of British Energy shares acquired. The CVR-linked Nuclear Power Note is a right to a conditional payment to be paid each year on January 31, between 2010 and 2019, depending on effective British Energy nuclear output and wholesale electricity prices in the UK. The Group has assessed their fair value at acquisition on the basis of the offer price (74 pence each);
  Future movements in the value of CVR-linked Nuclear Power Notes will be treated as an adjustment to the acquisition price, which will become final when they reach maturity. Since the Notes were listed at December 31, 2009 the Group based their fair value on their list price of 35 pence each, resulting in a £152 million adjustment to the acquisition price.
  The first payment made for the CVR-linked Nuclear Power Notes in January 2010 amounted to £44 million;
- expenses linked to the acquisition:

| | Number of shares | Unit value *(in pence)* | Amount *(in millions of GBP)* |
|---|---|---|---|
| British Energy Shares (1) | 1,611,519,535 | 774 | 12,469 |
| Acquisition costs | | | 142 |
| Acquisition price at January 5, 2009 | | | 12,611 |
| Adjustement in the value of CVR | | | (152) |
| Acquisition price at December 31, 2009 | | | 12,459 |

*(1) Including 389,982,701 CVR-linked Nuclear Power Notes valued at £289 million at January 5, 2009.*

Financing for the acquisition of British Energy was secured through:

- a syndicated bank loan of £11 billion subscribed on September 23, 2008. Drawings totaling £7,345 million (€8,186 million) were made on this loan in January 2009;
- and a private bond placement on January 26, 2009 with Qualified Institutional Buyers in the US and other investors outside the US, governed by Rule 144A of the US Securities and Exchange Commission of $5 billion.

Drawings on the syndicated loan were fully repaid during 2009 following refinancing, particularly with the following issues of:

- two bonds on January 23, 2009 (€4 billion);
- two bonds on the Swiss market on March 3, 2009 (CHF 650 million);
- a bond on June 2, 2009 (£1.5 billion);
- a retail bond in France on July 17, 2009 (€3.3 billion);
- five bonds in Japan in July 2009 (JPY 120.4 billion);
- a bond on September 11, 2009 (€2.5 billion).

For details of these bonds, see note 39.

## 5.1.3 Allocation of the acquisition price

British Energy's identifiable assets and liabilities and contingent liabilities qualifying for recognition under IFRS 3 (as published in 2004), whether or not they were previously recognized in British Energy's financial statements, were recognized by EDF at fair value at the acquisition date of January 5, 2009. These values are based on the initial balance sheet at January 5, 2009.

In compliance with IFRS 3 (2004), the Group has finalized allocation of the acquisition price and harmonized accounting methods and measurement principles.

## 5.1.4 Items in the initial British Energy balance sheet for the EDF group consolidation

After determination of the fair values of assets and liabilities, the finalized initial balance sheet at January 5, 2009 is as follows:

| | In millions of pounds | | | In millions of Euros |
|---|---|---|---|---|
| ASSETS | As published by British Energy | Fair value adjustment | Initial balance sheet in EDF consolidation | Initial balance sheet in EDF consolidation (1) |
| Goodwill | 321 | (321) | - | - |
| Property, plant and equipment used in generation and other tangible assets owned by the group | 1,657 | 7,128 | 8,785 | 9,388 |
| Conversion assets | 6,455 | (6,455) | - | - |
| Other intangible assets | 48 | 623 | 671 | 717 |
| Financial assets | 5,662 | - | 5,662 | 6,050 |
| Inventories | 1,289 | 593 | 1,882 | 2,011 |
| Trade receivables | 610 | - | 610 | 652 |
| Cash and cash equivalents | 1,224 | - | 1,224 | 1,308 |
| **TOTAL ASSETS** | **17,266** | **1,568** | **18,834** | **20,126** |
| LIABILITIES | | | | |
| Nuclear provisions | 6,611 | 159 | 6,770 | 7,234 |
| Provisions for employee benefits | 269 | (257) | 12 | 13 |
| Other provisions | 41 | 1,318 | 1,359 | 1,452 |
| Deferred tax liabilities | 56 | 2,133 | 2,189 | 2,339 |
| Financial liabilities | 625 | 84 | 709 | 758 |
| Trade payables | 612 | (90) | 522 | 558 |
| Other liabilities | 53 | (5) | 48 | 51 |
| **TOTAL LIABILITIES** | **8,267** | **3,342** | **11,609** | **12,405** |
| **NET ASSETS** | **8,999** | **(1,774)** | **7,225** | **7,721** |
| **Consideration at January 5, 2009 (note 5.1.2)** | | | **12,611** | **13,476** |
| **Implied Goodwill at January 5, 2009** | | | **5,386** | **5,755** |
| **Adjustment of the value of the CVR-Linked Nuclear Power Notes (note 5.1.2)** | | | **(152)** | |
| **GOODWILL AT DECEMBER 31, 2009** | | | **5,234** | |

*(1) At the exchange rate of January 5 (£1 = €1.0686).*

After adjustment of the value of the CVR-Linked Nuclear Power Notes and changes in the sterling/Euro exchange rate, goodwill amounted to €5,894 million at December 31, 2009.

The main restatements applied in the initial balance sheet concern the following:

- fair value of power plants and lands: +£7,128 million
  The fair value of British Energy power plants has been determined using a discounted cash flow (post-tax DCF) valuation technique based on market data and the current operating lifetime of plants. The key assumptions concern:
  - electricity market prices in the UK,
  - projected electricity output, ignoring the effect of any extension to current plant lifetimes,
  - fossil and nuclear fuel costs,
  - maintenance and investment expenses.

  The fair value determined in this way is sensitive to these key assumptions. The value of lands was measured on the basis of the most recent auctions performed by the NDA (Nuclear Decommissioning Authority);
- removal of the conversion asset: £(6,455) million
  The "conversion asset" in the British Energy financial statements resulted from conversion into shares by the Nuclear Liabilities Fund (NLF) of its right to receive a payment (the "cash sweep payment" system). This right predated the takeover. As this share in net assets has no value for the EDF group, it does not constitute an identifiable asset at the acquisition date, and consequently is not recognized, but the new fair value of power plants includes the effects of the agreement by the NLF to bear the cost of British Energy's long-term nuclear obligations;
- commodity contracts
  Most of these contracts concern purchases or sales of electricity and nuclear fuel. They are measured at fair value under IFRS 3, and the adjustment reflects the difference between market prices at January 5, 2009 and the contract prices. An asset or liability corresponding to the positive or negative fair value of energy contracts at the acquisition date has therefore been recorded and will be extinguish progressively as deliveries take place at the contractual dates.

- other adjustments
  Other adjustments primarily relate to intangible assets related to the "British Energy" brand, lands held for sale, inventories, borrowings, contingent liabilities associated with litigation, and changes in the provision for employee benefits, adjusted to fair value.
- deferred taxation
  The amount corresponds to a deferred tax liability resulting from revaluation of assets, liabilities and contingent liabilities for the purposes of first consolidation of British Energy.

The goodwill generated by allocation of the acquisition price at January 5, 2009 amounts to £5,386 million (€5,755 million). This goodwill primarily relates to the economic benefits stemming from the corporate know-how acquired, prospects for extension of the useful lives of existing power plants, the possibility following acquisition of British Energy of building four new nuclear power plants, and the synergies expected between British Energy and the other EDF group entities appreciated as of today.

### 5.1.5 Commitments undertaken by EDF to meet the conditions set by the European Commission

The European Commission authorized Lake Acquisitions to acquire British Energy subject to the following conditions:
- a commitment to divest British Energy's coal-fired power plant at Eggborough and EDF Energy's gas-fired plant at Sutton Bridge. The option to buy Eggborough has been exercised by a banking consortium representing the majority of the plant's bondholders, and ownership should be transferred in late March 2010.
  A "capacity tolling agreement" was also signed with non-group parties to guarantee delivery of the total output of the Sutton Bridge plant.
- withdrawal of one of the three group's requests of connection to the high voltage electricity network managed by National Grid at Hinkley Point;
- sale on the market of electricity volumes ranging from 5 to 10 TWh per year over the period 2012 to 2015;
- a commitment by EDF to divest a land adjacent to British Energy nuclear plants at either Dungeness or Heysham.

### 5.1.6 Centrica-EDF Agreements

On November 26, 2009, EDF and Centrica executed two separate agreements concerning a 20% investment by Centrica in EDF's nuclear operations in the UK, and the sale to EDF by Centrica of its 51% holding in SPE.

The key terms of the transaction are as follows:
- Centrica acquired a proportional 20% investment in Lake Acquisitions/ British Energy for £2.2 billion, and will have a proportional involvement in the UK's nuclear energy relaunch program to be developed by EDF, through the construction of four new EPR-technology reactors. The agreement also entitles the EDF and Centrica groups to draw electricity that will be generated by existing British Energy plants and the New Nuclear Plants, in proportion to their investment;
- EDF will supply an additional 18 TWh of electricity to Centrica at market prices, over a 5-year period starting from 2011 (see note 12.2);
- EDF acquired Centrica's previous holding in SPE in Belgium for €1.3 billion (see note 5.2).

The sale of 20% of Lake Acquisitions / British Energy to Centrica had a negative effect of €252 million, which was recorded in equity as the operation concerns minority interests and did not result in any loss of control.

## 5.2 SPE

### 5.2.1 Takeover of SPE

On November 12, 2009, the European Commission approved the acquisition by EDF of Centrica's 100% share in Segebel, which owns 51% of SPE. SPE is the second-largest Belgian electricity producer and also the number two supplier of gas and electricity in Belgium. Approval was given subject to the following conditions:
- a commitment by EDF to sell one of its two combined cycle gas plant development projects in Belgium;
- a commitment to sell its other combined cycle gas plant project in Belgium in the future if EDF decides not to invest in the project itself.

Transfer of ownership of the shares took place on November 26, 2009 and SPE is fully consolidated in the EDF group's financial statements from that date.

### 5.2.2 Acquisition value

The final acquisition cost for the 51% share in SPE was €1,328 million, which was paid cash in full on November 26, 2009.

### 5.2.3 Allocation of the acquisition price

The identifiable assets, liabilities and contingent liabilities of SPE qualifying for recognition under IFRS 3 (as published in 2004) are recognized in the initial balance sheet at their fair value at the acquisition date of November 26, 2009.

In compliance with IFRS 3, these values are provisional and the Group has twelve months to finalize allocation of the acquisition price and harmonize accounting methods and measurement principles.

Based on the fair value of assets and liabilities, SPE's initial balance sheet at November 26, 2009 is as follows:

| *(in millions of Euros)* | Initial balance sheet in EDF consolidation |
|---|---|
| Non-current assets | 2,434 |
| Current assets | 659 |
| **Total assets** | **3,093** |
| Non-current liabilities | 903 |
| Current liabilities | 1,342 |
| **Net assets** | **848** |
| **Consideration** | **1,328** |
| **ESTIMATE GOODWILL** | **480** |

The main restatements applied in the initial balance sheet concern the following:

- power plants and drawing rights: the fair value of SPE's plants and the drawing right on the Chooz B plant has been determined by the discounted cash flow method (post-tax DCF) based on market data at November 26, 2009 and the current useful life of power plants. The main assumptions relate to:
  - the market price for electricity in Belgium,
  - projected volumes of electricity output,
  - the costs of nuclear and fossil fuels,
  - maintenance expenses and investments.

  The value determined in this way remains sensitive to the main assumptions used.
- commodity contracts: these contracts are mainly for gas and electricity purchases and sales. In compliance with IFRS 3, the adjustment reflects the difference in market prices at November 26, 2009 and the contract price. The Group thus records an asset or liability corresponding to the positive or negative value of energy contracts at the acquisition date, which will be extinguish when deliveries take place at the dates specified in the contracts. The effects of contracts previously recorded at EDF and SPE are included in this value;
- customer contracts: these contracts are measured based on assumptions specific to each customer segment and the nature of the products sold;
- other adjustments: mainly concern intangible assets related to the "Luminus" brand;
- deferred taxes: these result from remeasurement of assets and liabilities detailed above.

### 5.2.4 Option to repurchase minority shareholdings in SPE

The pact between Segebel and SPE shareholders gives the shareholders an option to sell their shares. The option can be exercised within three months of notification of EDF's transaction with Centrica.

The EDF group could be obliged to purchase all or some of the shares belonging to minority shareholders in SPE, as each individual shareholder could exercise his option for all of his shares.

In compliance with the Group's accounting methods, the put option held by SPE's minority shareholders is recorded in "Other liabilities". As no known offer existed at the year-end, this option has been estimated on the basis of the minority shareholders' holdings.

## 5.3 Constellation Energy Nuclear Group (CENG)

### 5.3.1 History of the operation

Once all the required authorizations had been issued by the US Federal and local authorities, EDF, through its wholly-owned subsidiary EDF Inc., and Constellation Energy Group (CEG) finalized EDF's 49.99% investment in CENG on November 6, 2009 as initially agreed in the agreement signed on December 17, 2008, for $4.5 billion.

Under the terms of this agreement, the EDF group had strengthened CEG's liquidity position through a $1 billion cash contribution to the CEG group on December 17, 2008 through subscription of non-convertible cumulative preferred stock issued by CEG, bearing interest at 8%. This preferred stock was surrendered to CEG in the form of a credit against the $4.5 billion purchase price for the EDF group's 49.99% interest in CENG.

The EDF group also contributed $150 million to the reimbursement of certain transaction costs at the same date.

CENG is the entity that operates CEG's nuclear generation activities.

Given the governance arrangements at CENG and the fact that operations are jointly controlled by the EDF group and CEG, CENG is proportionally consolidated from the date of first inclusion in the scope of consolidation, November 6, 2009.

### 5.3.2 Acquisition price

The acquisition price for the 49.99% holding in CENG amounts to $4,652 million, the equivalent of €3,136 million based on the exchange rate at the date of completion of the transaction ($1 = €0.6741).

This price comprises:

- a $939 million (€633 million) contribution to the capital of CENG made on November 6, 2009;
- a cash payment of $3,528 million (€2,378 million) including $1 billion (€674 million) granted in December 2008 as an advance against the purchase price (see note 5.3.1);
- $185 million (€125 million) of expenses related to the acquisition, including contribution to reimbursement of certain transaction expenses as mentioned in note 5.3.1.

The estimated fair value of future payments to CEG under an arrangement to share the tax savings resulting from the fiscal structure of the operation amounts to $343 million (€231 million) (see note 5.3.4).

Also, certain related acquisition costs resulting from the agreements signed on December 17, 2008 were recorded in expenses for 2009. These costs amounted to $169 million (€121 million) before taxes.

## 5.3.3 Allocation of the acquisition price

The identifiable assets, liabilities and contingent liabilities of CENG qualifying for recognition under IFRS 3 (as published in 2004) are recognized in the initial balance sheet at their fair value at the acquisition date of November 6, 2009.

In compliance with IFRS 3, these values are provisional at December 31, 2009 and the Group has twelve months to finalize allocation of the acquisition price and harmonize accounting methods and measurement principles.

## 5.3.4 Items in the initial CENG balance sheet for the EDF group consolidation

After determination of the fair values of assets and liabilities, the initial CENG balance sheet at November 6, 2009 is as follows:

| | In millions of US dollars | | | In millions of Euros |
|---|---|---|---|---|
| ASSETS | As published by CENG | Fair value adjustment | Initial balance sheet in EDF consolidation at 49.99% | Initial balance sheet in EDF consolidation at 49.99% (1) |
| Property, plant and equipment used in generation and other tangible assets owned by the group | 1,303 | 4,352 | 5,655 | 3,811 |
| Other intangible assets | - | 62 | 62 | 42 |
| Non-current financial assets | 604 | - | 604 | 407 |
| Deferred tax assets | - | 657 | 657 | 443 |
| **Non-current assets** | **1,907** | **5,071** | **6,978** | **4,703** |
| Inventories, including work in process | 328 | 69 | 397 | 268 |
| Trade receivables | 27 | - | 27 | 18 |
| Other receivables | 22 | (3) | 19 | 13 |
| Cash and cash equivalents | 112 | (110) | 2 | 2 |
| **Current assets** | **489** | **(44)** | **445** | **301** |
| **Assets classified as held for sale** | | | | |
| **TOTAL ASSETS** | **2,396** | **5,027** | **7,423** | **5,004** |
| LIABILITIES | | | | |
| Provisions for decommissioning and for last cores | 566 | 67 | 633 | 426 |
| Provisions for employee benefits | 88 | 53 | 141 | 96 |
| **Non-current provisions** | **654** | **120** | **774** | **522** |
| Deferred tax liabilities | 3 | 772 | 775 | 522 |
| **Non-current liabilities** | **3** | **772** | **775** | **522** |
| Trade payables | 22 | - | 22 | 15 |
| Other liabilities | 442 | 432 | 874 | 589 |
| **Current liabilities** | **464** | **432** | **896** | **604** |
| **Liabilities related to assets classified as held for sale** | | | | |
| **TOTAL LIABILITIES** | **1,121** | **1,324** | **2,445** | **1,648** |
| **NET ASSETS** | **1,275** | **3,703** | **4,978** | **3,356** |
| **Consideration** | | | **4,652** | **3,136** |
| **Sharing of future tax savings** | | | **343** | **231** |
| **ESTIMATE GOODWILL** | | | **17** | **11** |

*(1) At the exchange rate of November 6, 2009 ($1 = €0.6741).*

The main restatements applied in the initial balance sheet concern the following:

- fair value of power plants and land ($4,352 million): the fair value of CENG's plants has been determined by the discounted cash flow method (post-tax DCF) based on market data and the current operating licence for each power plant. The main assumptions relate to:
  - the market price for electricity in the United States,
  - projected volumes of electricity output,
  - nuclear fuel costs,
  - maintenance expenses and investments.

  The fair value determined in this way is sensitive to the main assumptions used.
- fair value of long-term electricity sale contracts: this is measured as the present value of the difference between contractualized income and income measured on the basis of market prices at the acquisition date over the residual term of the contracts concerned;
- fair value of fuel and fuel purchase contracts: this is calculated as the difference between market prices and contract prices for uranium supplies, conversion and enrichment;
- obligations for nuclear plant decommissioning: these are discounted at a risk-free rate at the date of first consolidation.

### 5.3.5 Put options and other commitments undertaken by EDF

When the agreement of December 17, 2008 was signed, the EDF group and CEG also entered into a two-year put option that allows CEG to sell EDF certain non-nuclear generation assets for a value of up to $2 billion. This option concerns eleven assets with combined value of over $2 billion and can now be exercised until December 31, 2010.

### 5.3.6 Investment in CEG

At December 31, 2009, the 8.44% interest in CEG held by the EDF group was valued using the December 31, 2009 stock market price of $35.17 per share, giving a total of €414 million. Further impairment of €232 million was thus recorded at December 31, 2009.

# Note 6 Other major events and transactions



## 6.1 Significant events and transactions in 2009

### 6.1.1 Consolidation of the structure of financial indebtedness

The EDF group made extensive use of external financing in 2009.

These issues, essentially undertaken by EDF, RTE EDF Transport, EnBW, EDF Energy and Edison, are part of the policy to finance the investment program and extend the average maturity of Group debt.

The Group undertook large-scale bond issue programs during the year, principally in Euros, US dollars, pounds sterling and yen, for a total of €18.9 billion. Details of the main new operations are provided in note 39.2. One of these operations was a retail bond issue in France on June 17, 2009 which had raised €3,269 million by the time the subscription period closed on July 6, 2009. This bond bears interest at the fixed rate of 4.25% and will be fully redeemed at the end of a 5-year period. The operation was settled on July 17, 2009 and the bonds have been listed on Euronext Paris since that date.

## 6.1.2 Ongoing economic crisis

2009 was marked by a degraded economic environment. Financially, the international equity markets continued to decline until early March, but registered a subsequent upturn in an unsettled environment marked by high volatility.

This note provides the references to the various documents, chapters and sections referring to this issue for matters related to the financial markets or commodity and energy markets.

The principles applied for classification, measurement and impairment of financial assets and liabilities are presented in note 3.16 to the financial statements. The Group has not opted to reclassify any financial instruments under the amendment to IAS 39 endorsed by the European Commission.

A description of the types of financial risk and energy market risks and the Group's management and control framework for those risks can be found in section 1.9 of the Management Report, and note 40 to the financial statements.

The sensitivity analysis required by IFRS 7 is contained in the Management Report:
- Foreign exchange risk: section 1.9.1.3;
- Interest rate risk on financing issued and financial assets: section 1.9.1.4;
- Energy market risks: section 1.9.2;
- Equity risk on financial assets: section 1.9.1.5.

The principal information on financial assets and liabilities are described by theme in the following notes and sections:
- Liquidity risks:
  - Maturity of loans and other financial liabilities: note 39.2.2 to the financial statements,
  - Covenants and off balance sheet commitments: note 39.5 to the financial statements,
  - Off balance sheet investment commitments: note 27.5 to the financial statements,
  - Off balance sheet commitments: section 1.11 of the Management Report;
- Foreign exchange risks:
  - Breakdown of loans by interest rate and currency: note 39.2 to the financial statements;
- Equity risks (Management Report – section 1.9.1.5):
  - Coverage of nuclear obligations: notes 27.3.2.1 and 35.2.3 to the financial statements,
  - Coverage of social obligations: note 36.5 to the financial statements,
  - Long-term cash management,
  - Direct investments;
- Interest rate risks:
  - Discount rate for nuclear provisions: calculation method and sensitivity: note 35.2.3 to the financial statements,
  - Discount rate used for employee benefits: note 36.4 to the financial statements,
  - Breakdown of loans by interest rate and currency: note 39.2 to the financial statements;
- Balance sheet treatment of financial and market risks:
  - Derivatives and hedge accounting: note 41 to the financial statements, with direct correspondence to the statement of changes in equity,
  - Derivatives not recorded as hedges: note 42 to the financial statements.

## 6.1.3 Alpiq and contribution of the Emosson drawing rights

On December 19, 2008, the Swiss energy groups ATEL and EOS announced their intention to merge under the name of Alpiq, with the aim of becoming Switzerland's leading energy operator. Under the terms of an agreement signed on December 18, 2008 by EDF, EOSH and CSM, the consortium of long-standing minority shareholders in ATEL, EDF was to hold a direct 25% share in the new entity, while EOSH and CSM would each hold 31%.

In accordance with this agreement, on January 27, 2009:
- EDF contributed to Alpiq its 50% share in power and energy deriving from its 50% investment in the hydroelectric development at Emosson over the residual term of existing concessions, for the sum of CHF 722 million (€481 million). EDF received 1,187,511 shares in Alpiq Holding SA in consideration of this contribution in kind;
- and EDF Alpes Investissements, wholly-owned by EDF International, purchased 554,751 shares in Alpiq from the consortium of Swiss minority shareholders, for CHF 336 million (€224 million) in cash.

The contribution in kind generated a €320 million pre-tax gain in the EDF group consolidated financial statements resulting from the transaction itself and the resulting impairment on the assets of Emosson SA held by EDF. As this income is unusual in both nature and amount, it was included in "Other income and expenses" (see note 18).

These operations are reflected in a €705 million increase in "Investments in companies accounted for under the equity method" in the consolidated balance sheet (see note 26) and resulted in deconsolidation of Emosson SA.

## 6.1.4 EDF-EnBW-E.ON agreements and sale of the investment in Snet

On September 30, 2009, EDF, EnBW and E.ON signed an agreement for exchanges of drawing rights and electricity generation assets for more than 1,200 MW between France and Germany.

Under the terms of these agreements, in December 30, 2009 EDF, jointly with longstanding 16.25% shareholder Charbonnages de France, transferred its 18.75% investment in Snet to E.ON for the sum of €193 million.

On January 1, 2010, EnBW then acquired:
- drawing rights for 800 MW of nuclear energy in Germany from E.ON's nuclear fleet;
- E.ON's majority shareholding in the Rostock coal-fired plant with power of 256 MW;
- drawing rights for 159 MW on the Buschhaus coal-fired plant.

In return, E.ON acquired a drawing right to 800 MW of nuclear power in France, deriving from old drawing rights held by EnBW in respect of EDF's nuclear output.

## 6.1.5 Cancellation of the European Commission's decision of December 16, 2003

A European Court ruling of December 15, 2009 cancelled the European Commission's decision of December 16, 2003 which had declared that

EDF's non-payment in 1997 of income taxes on the utilized portion of provisions for renewal of French national grid facilities recorded under "grantor's rights" should be classified as state aid, and ordered its recovery by the French State.

In application of this decision, which is open to appeal until March 1, 2010, on December 30, 2009 the State returned to EDF the sum of €1,224 million, corresponding to the amount paid by EDF to the State in 2004.

Taking a symmetrical approach to the accounting treatment applied in 2003, the total sum was allocated between an increase in reserves (€889 million) and financial income (€335 million) in reimbursement of the interest paid for the period 1997-2004.

# 6.2 Significant events and transactions in 2008

In addition to the general deterioration of the economic situation and the high volatility observed on the equity and commodity markets, the principal events of 2008 were as follows.

## 6.2.1 Consolidation of the financial indebtedness structure

Bond issues amounted to €7.5 billion by EDF, €2.25 billion by RTE-EDF Transport and €1.5 billion by EnBW.

## 6.2.2 EDF-AREVA agreement for management of spent nuclear fuel

On December 19, 2008, EDF and AREVA signed a long-term framework agreement for industrial cooperation (2040), concerning removal of all EDF's spent fuel, the technical and financial conditions of transportation, processing and recycling of the spent fuel (2008-2012), and the amount of the payment for dismantling of AREVA's plant at La Hague.

The agreement clarifies the principles for future cooperation between EDF and AREVA based on two reciprocal commitments:

- AREVA will operate the La Hague plant and the Melox plant until 2040, with the aim of continuous improvement in the industrial and economic performance for the benefit of EDF;
- EDF will use these facilities until 2040 and during that time will rely on AREVA for transportation of spent fuel.

The agreement is a continuation of the longstanding ties between the two companies, which have been based on the following arrangements since EDF's first nuclear power plants were commissioned:

- collection and transportation of spent fuel from EDF power plants to the La Hague plant;
- separation of recyclable fuel material from final residues at La Hague and supply of MOX fuel to the Melox plant;
- conditioning and minimizing the volumes of final residues, by vitrifying long life high-level waste or compacting long-life medium-level waste, for safe interim storage in dedicated installations at La Hague.

The full payment to be made by EDF to AREVA for recovering and conditioning of old waste, final shutdown, and dismantling costs for the La Hague plant is fixed in the industrial cooperation agreement of December 19, 2008 at €2.3 billion at January 1, 2008, based on the economic conditions of December 31, 2007.

As a result of this framework agreement, the amount of the provision for EDF's full payment was reversed and recognized as an operating liability of €1.478 billion including taxes, after deduction of the advances EDF has already paid to AREVA.

The two Groups had undertaken to negotiate the principles of a final contract under this framework agreement by December 31, 2009, particularly concerning the practical conditions for settlement of the liability. An agreement signed on July 6, 2009 set the exact amounts and timing of these payments, with the final installment due by July 1, 2011. Other clauses of the framework agreement were still under discussion at the year-end.

## 6.2.3 Capital increase by EDF Énergies Nouvelles

To finance its development in the field of photovoltaic solar power, the EDF Énergies Nouvelles group increased its capital by a final gross amount of €499,540,592 (including the issue premium). This led to issuance of 15,513,683 new shares with nominal value of €1.60 each, delivered on September 30, 2008 at a price of €32.20 each.

The EDF group and the Mouratoglou group, which together own 75.1% of the capital and voting rights of EDF Énergies Nouvelles, used all their rights in the subscription.

## 6.2.4 Partnership agreement with Exeltium

Following in-depth discussions, the European Commission confirmed on July 30, 2008 that the industrial partnership agreement between EDF and Exeltium (a consortium of large electricity-intensive customers) met its requirements regarding compliance with competition laws.

This agreement covers volumes of some 310 TWh spread over 24 years. Its purpose is to make energy supplies more secure for Exeltium, which will have greater visibility over long-term electricity supply prices in return for sharing risks relating to development and operation of EDF nuclear power plants.

The first deliveries of electricity are due to take place as soon as Exeltium has the necessary financing in place.

## 6.2.5 Germany

On July 10, 2008, EnBW's bid to acquire a 26% stake in EWE AG Oldenburg was accepted, for a total of approximately €2 billion. The operation required authorization by the German anti-cartel authorities and was completed in 2009 (note 5.4).

The German regulator Federal Network Agency also notified EnBW of a reduction in gas transmission network access fees, leading the Group to recognize an impairment loss of €166 million in respect of EnBW assets at December 31, 2008.

# Note 7 Changes in the scope of consolidation



## 7.1 Changes in the scope of consolidation in 2009

In addition to the major external growth operations,
- completion of the takeover of British Energy, followed on November 26, 2009 by the sale of 20% of British Energy to Centrica;
- acquisition of 51% of SPE;
- acquisition of 49.99% of CENG;

described in detail in note 5, the other main changes in the scope of consolidation concern the following companies:

**– Germany**

- acquisition on March 31, 2009 of 100% of three windfarm operators at Cuxhaven for €33 million (EDF's share: €15 million);
- acquisition from E.ON on May 29, 2009 of 100% of Lippendorf GmbH, which owns 50% of the Lippendorf plant, and 100% of Bexbach GmbH, which owns 8.3% of the Bexbach coal-fired plant. The total acquisition price amounts to €907 million (EDF's share: €418 million). This operation was followed on October 1, 2009 by acquisition from STAWAG of a further 16.7% share in the Bexbach power plant for €84 million (EDF's share: €39 million). The goodwill on these transactions amounts to €2 million (EDF's share: €1 million).

| *(in millions of Euros)* | Acquisition Lippendorf and Bexbach from E.ON | Acquisition Bexbach from STAWAG | Initial balance sheet in EDF consolidation |
|---|---|---|---|
| Acquisition cost | 907 | 84 | 991 |
| **Total [1]** | **907** | **84** | **991** |
| Non-current assets | 754 | 69 | 823 |
| Current assets | 197 | 19 | 216 |
| Non-current liabilities | (5) | (5) | (10) |
| Current liabilities | (40) | - | (40) |
| **Net assets [2]** | **906** | **83** | **989** |
| **Goodwill at EnBW level [(1) - (2)]** | **1** | **1** | **2** |
| **GOODWILL AT EDF LEVEL (46.07%)** | **-** | **-** | **1** |

- EWE
  On July 6, 2009, the German anti-cartel authorities announced their decision to authorize EnBW to acquire a 26% stake in EWE, on condition that EnBW sold its subsidiary GESO or EWE's investment in VNG.

  The transaction was completed on July 21, 2009 for a total of approximately €2 billion (EDF's share: approximately €1 billion).

  EWE is included in the EnBW financial statements under the equity method.

  EWE's principal areas of specialization are gas and electricity supply, gas distribution, telecommunications and information technologies;
- acquisition on July 31, 2009 of 50% of Borusan in Turkey (joint venture).

### – Italy

Edison undertook the following operations:
- acquisition in January 2009 of the Abu Qir gas concession in Egypt, for €1,011 million [(1)] (EDF's share: €495 million). The acquisition price is totally allocated to intangible assets;
- acquisition in March 2009 of a 80% investment in AMG Gas SRL, for €25 million[(1)] (EDF's share: €12 million);
- acquisition in March 2009 of 100% of Energiaki Thessaloriki SA (T.Power) through the 50/50 Edison-Hellenic Petroleum joint venture Elpedison BV;
- control of Société Sistemi di Energia Group in July 2009 through the purchase of an additional batch of shares, raising Edison's investment from 40.57% to 86.12%.

### – Other International

- purchase in March 2009 from the Polish state of 28.05% of the shares of EC Krakow, raising EDF's holding in EC Krakow from 66.26% to 94.31%;
- purchase in June 2009 from GDF SUEZ of 20% in SIA by EDF International, resulting in full ownership of SIA and a 25% holding in Estag for €79 million. As the shareholder agreements governing joint control of Estag were made permanent in 2009, from July 2009 the company is proportionally consolidated in the Group's financial statements.
- purchase in June 2009 of 35% of the shares in Datang Sanmenxia Power Generation Co. Ltd. from Sanmenxia Construction Investment Center for €35 million;
- formation in December 2009 of the joint venture Taishan Nuclear Power Joint Venture Co. Ltd. (TNPJVC) to own, construct and operate two EPR-technology nuclear reactors in Taishan. EDF holds 30% of the capital of TNPJVC, with a value of €279 million.

### – Other activities

- additional investment in EDF Investissement Groupe in June and November 2009, raising the Group's percentage interest from 84.85% to 93.01%;
- sale by Dalkia International of British subsidiaries during the second half-year for €50 million, generating a gain of €37 million;
- application of the equity method to Domofinance from October 1, 2009, following changes in the company's shareholder agreements.

## 7.2 Changes in the scope of consolidation during 2008

The main changes in the scope of consolidation during 2008 were the following:

### – Italy

- sale by Edison in April 2008 of seven thermoelectric plants;
- sale on May 1, 2008 of 51% of Dolomiti Edison Energy, owner of three hydropower plants in the Trento province, and on October 24, 2008 of 60% of Hydros, owner of 7 hydropower plants in Bolzano province. Both these companies remained fully consolidated by Edison;
- formation of Edison Engineering SA, which is constructing a combined cycle gas plant at Thisvi in Greece.

### – Other international

- purchase by EDF of shares in EC Wybrzeze (Poland) for €54 million after GDF SUEZ exercised its put option, raising the EDF group's ownership interest from 77.52% to 99.66%.

### – Other activities

- sale of SOPROLIF completed in February 2008;
- various external growth operations by Dalkia International, including acquisition of the Praterm Group in Poland;
- increase in EDF Énergies Nouvelles' investment in Fotosolar from 45.83% to 90%;

1. 100% of the value as booked by Edison.

- sale in December 2008 of Clemessy, a company owned by Dalkia Holding, generating a gain of €184 million. The EDF group's share amounts to €63 million and is reported under "Investments in companies accounted for under the equity method";
- acquisition in October 2008 of 100% of Eagle Energy Partners by EDF Trading for $230 million (€181 million). The net assets acquired, after fair value adjustments, amount to $238 million (€184 million). Eagle Energy Partners operates in the US, specializing in natural gas transmission and storage services, and asset optimization services on the wholesale gas and electricity markets. The company was renamed EDF Trading North America in October 2009;
- acquisition on December 18, 2008 by EDF Production UK, a wholly-owned subsidiary of EDF, of 80% of the investments held by ATP Oil and Gas UK in three North Sea gasfields for £265 million;
- additional investment in the capital of EDF Investissement Groupe through a €1.806 billion contribution in December 2008 to a capital increase reserved for C3, raising the Group's percentage holding from 66.67% to 84.85%.

# Note 8 Segment reporting



## 8.1 Reporting by operating segment

Segment reporting presentation complies with IFRS 8, "Operating segments", which replaced IAS 14 from January 1, 2009.

Segment reporting is determined before inter-segment consolidation adjustments and inter-segment eliminations. Inter-segment transactions take place at market prices.

In accordance with IFRS 8, the breakdown used by the EDF group corresponds to the operating segments as regularly reviewed by the Management Committee. The breakdown used by the EDF group for geographical areas is as follows:

- "**France**", which refers to EDF and its subsidiaries RTE EDF Transport and ERDF, comprising the deregulated activities (mainly Generation and Supply), network activities (Distribution and Transmission) and island activities;
- "**United Kingdom**", which comprises the entities of the EDF Energy subgroup including British Energy and EDF Development UK Ltd.;
- "**Germany**", which refers to the entities of the EnBW subgroup;
- "**Italy**", which covers all the entities located in Italy, principally the Edison subgroup, TDE and Fenice;
- "**Other international**", which covers the other gas and electricity entities located principally in continental Europe including Belgium, but also in the USA, Latin America and Asia, and EDF International;
- "**Other activities**", which groups together all the Group's other investments, including Électricité de Strasbourg, Dalkia, TIRU, EDF Énergies Nouvelles, EDF Trading and EDF Investissement Groupe.

The effects of introducing this new segmentation are limited, and mainly concern reassignment of entities from the former "Rest of Europe" and "Rest of the World" segments between the new segments "Other International" and "Other activities".

Segment information for 2008 has been restated according to the new segments.

## 8.1.1 At December 31, 2009

| *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other international | Other activities | Eliminations | Total |
|---|---|---|---|---|---|---|---|---|
| External sales | 34,004 | 11,036 | 7,195 | 4,877 | 3,437 | 5,787 | - | 66,336 |
| Inter-segment sales | 577 | (7) | 20 | 9 | 143 | 562 | (1,304) | - |
| **TOTAL SALES** | **34,581** | **11,029** | **7,215** | **4,886** | **3,580** | **6,349** | **(1,304)** | **66,336** |
| **OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION** | **9,434** | **3,062** | **1,193** | **801** | **686** | **2,290** | **-** | **17,466** |
| **Operating profit** | **5,143** | **1,704** | **796** | **300** | **287** | **1,877** | **-** | **10,107** |
| **Balance sheet:** | | | | | | | | |
| Intangible assets and property, plant and equipment | 84,994 | 20,631 | 6,579 | 5,434 | 9,611 | 7,642 | - | 134,891 |
| Investments in companies accounted for under the equity method | 18 | 23 | 1,667 | 21 | 2,085 | 607 | - | 4,421 |
| Goodwill | - | 7,831 | 1,387 | 2,026 | 786 | 1,496 | - | 13,526 |
| Other segment assets (1) | 24,479 | 4,477 | 2,102 | 1,335 | 1,471 | 6,542 | - | 40,406 |
| Assets classified as held for sale | - | 432 | 772 | - | 1 | 60 | - | 1,265 |
| Other non-allocated assets | - | - | - | - | - | - | - | 47,405 |
| **TOTAL ASSETS** | **109,491** | **33,394** | **12,507** | **8,816** | **13,954** | **16,347** | **-** | **241,914** |
| **Other information:** | | | | | | | | |
| Investments in intangible assets and property, plant and equipment (2) | 7,162 | 2,193 | 593 | 483 | 381 | 1,558 | - | 12,370 |
| Net depreciation and amortization | (4,122) | (1,331) | (380) | (458) | (276) | (409) | - | (6,976) |
| Impairment | - | - | (17) | (43) | (5) | (1) | - | (66) |

*(1) Other segment assets include inventories, trade receivables and other receivables.*

*(2) Investments in intangible assets and property, plant and equipment are equal to assets acquisition in cash flow statement.*

## 8.1.2 At December 31, 2008

| *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other international | Other activities | Eliminations | Total |
|---|---|---|---|---|---|---|---|---|
| External sales | 34,264 | 8,244 | 7,467 | 5,610 | 3,044 | 5,218 | - | 63,847 |
| Inter-segment sales | 481 | 2 | 42 | 1 | 136 | 506 | (1,168) | - |
| **TOTAL SALES** | **34,745** | **8,246** | **7,509** | **5,611** | **3,180** | **5,724** | **(1,168)** | **63,847** |
| **OPERATING PROFIT BEFORE DEPRECIATION AND AMORTIZATION** | **9,009** | **943** | **1,114** | **911** | **505** | **1,758** | **-** | **14,240** |
| **Operating profit** | **4,588** | **499** | **558** | **416** | **399** | **1,450** | **-** | **7,910** |
| **Balance sheet:** | | | | | | | | |
| Intangible assets and property, plant and equipment | 81,225 | 8,982 | 6,246 | 4,974 | 2,792 | 6,455 | - | 110,674 |
| Investments in companies accounted for under the equity method | 20 | 61 | 848 | 25 | 1,297 | 601 | - | 2,852 |
| Goodwill | - | 1,786 | 1,405 | 2,020 | 160 | 1,436 | - | 6,807 |
| Other segment assets (1) | 23,106 | 1,654 | 2,516 | 1,600 | 729 | 7,359 | - | 36,964 |
| Assets classified as held for sale | - | - | 2 | - | - | - | - | 2 |
| Other non-allocated assets | - | - | - | - | - | - | - | 43,193 |
| **TOTAL ASSETS** | **104,351** | **12,483** | **11,017** | **8,619** | **4,978** | **15,851** | **-** | **200,492** |
| **Other information:** | | | | | | | | |
| Investments in intangible assets and property, plant and equipment (2) | 5,172 | 1,462 | 572 | 474 | 480 | 1,543 | - | 9,703 |
| Net depreciation and amortization | (3,923) | (444) | (382) | (453) | (208) | (304) | - | (5,714) |
| Impairment | (14) | - | (174) | (42) | 113 | 2 | - | (115) |

*(1) Other segment assets include inventories, trade receivables and other receivables.*

*(2) Investments in intangible assets and property, plant and equipment are equal to assets acquisition in cash flow statement.*

# 8.2 Sales to external customers, by product and service group

The Group's sales are broken down by product and service group as follows:

- **Generation/Supply**: energy generation and energy sales to industry, local authorities, small businesses and residential consumers;
- **Distribution**: management of the low and medium-voltage public distribution network;
- **Transmission**: operation, maintenance and development of the high-voltage and very-high-voltage electricity transmission network;
- **Other**: energy services (district heating, thermal energy services, etc.) for industry and local authorities, and new businesses mainly aimed at boosting electricity generation through cogeneration and renewable energy sources (*e.g.* wind turbines, solar panels, etc.).

| *(in millions of Euros)* | Generation Supply | Distribution | Transmission | Other | Eliminations [1] | Total |
|---|---|---|---|---|---|---|
| **At December 31, 2009** | | | | | | |
| External sales: | | | | | | |
| France | 21,729 | 9,149 | 4,168 | 108 | (1,150) | 34,004 |
| Rest of the world | 25,902 | 2,284 | 637 | 3,509 | - | 32,332 |
| **TOTAL SALES** | **47,631** | **11,433** | **4,805** | **3,617** | **(1,150)** | **66,336** |
| **At December 31, 2008** | | | | | | |
| External sales: | | | | | | |
| France | 21,968 | 9,031 | 4,211 | 140 | (1,086) | 34,264 |
| Rest of the world | 23,218 | 1,827 | 643 | 3,895 | - | 29,583 |
| **TOTAL SALES** | **45,186** | **10,858** | **4,854** | **4,035** | **(1,086)** | **63,847** |

*(1) Eliminations between regulated activities (Distribution – Transmission): (192) for 2009, (66) for 2008;*
*Eliminations between unregulated activities: (26) for 2009, (23) for 2008.*

# Note 9 Sales

Sales are comprised of:

| *(in millions of Euros)* | 2009 | 2008 [1] |
|---|---|---|
| Sales of energy and energy-related services | 60,566 | 57,823 |
| Other sales of goods and services | 4,560 | 4,800 |
| Change in fair value of commodity contracts | 52 | 11 |
| Trading | 1,158 | 1,213 |
| **SALES** | **66,336** | **63,847** |

*(1) Edison's trading revenues are now presented net of purchases. Presentation of figures for 2008 has been adjusted accordingly (note 2).*

Consolidated sales are 3.9% higher than for 2008. They include €3,311 million of British Energy sales, as well as negative foreign exchange effects chiefly associated with the movements in average exchange rates between 2008 and 2009 for the pound sterling, the zloty and the forint.

# Note 10 Fuel and energy purchases

Fuel and energy purchases comprise:

| *(in millions of Euros)* | 2009 | 2008 (1) |
|---|---|---|
| Fuel purchases used - power generation | (9,606) | (11,537) |
| Energy purchases | (14,355) | (15,378) |
| Transmission and delivery expenses | (2,690) | (2,177) |
| Gain/loss on hedging operations | (506) | 97 |
| (Increase)/decrease in provisions related to nuclear fuels and energy purchases | 599 | 2,405 |
| **FUEL AND ENERGY PURCHASES** | **(26,558)** | **(26,590)** |

*(1) Edison's trading revenues are now presented net of purchases. Presentation of figures for 2008 has been adjusted accordingly (note 2).*

Fuel and energy purchases are €32 million or 0.1% lower than for 2008. They include the effect of acquisition of British Energy (€(951) million), and foreign exchange effects chiefly associated with fluctuations in the pound sterling and the zloty.

# Note 11 Other external expenses

Other external expenses comprise:

| *(in millions of Euros)* | 2009 | 2008 (1) |
|---|---|---|
| External services and other purchases | (15,293) | (13,321) |
| Change in inventories and capitalized production | 3,807 | 2,961 |
| (Increase)/decrease in provisions on other external expenses | 255 | 102 |
| **OTHER EXTERNAL EXPENSES** | **(11,231)** | **(10,258)** |

The increase in other external expenses includes the effect of first consolidation of British Energy (€(610) million).

# Note 12 Contractual obligations and commitments



## 12.1 Purchase commitments

In the course of its generation and supply activities, the Group has entered into long-term contracts for purchases of electricity, gas, other energies and commodities, as well as nuclear fuels, for periods of up to 20 years. In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

EDF has also entered into long-term purchase contracts with a certain number of electricity producers, by contributing to the financing of power plants.

At December 31, 2009, firm irrevocable purchase commitments mature as follows (in millions of current Euros):

| | 12.31.2009 | | | | | 12.31.2008 |
|---|---|---|---|---|---|---|
| | Total | Maturity | | | | Total |
| *(in millions of Euros)* | | < 1 year | 1 - 5 years | 5 - 10 years | > 10 years | |
| Electricity purchases | 16,010 | 4,146 | 5,076 | 3,955 | 2,833 | 15,061 |
| Gas purchases (1) | 10,488 | 1,659 | 4,355 | 2,890 | 1,584 | 14,467 |
| Other energy and commodity purchases | 4,020 | 818 | 1,548 | 1,469 | 185 | 4,711 |
| Nuclear fuel purchases | 21,060 | 2,448 | 6,523 | 6,338 | 5,751 | 19,242 |
| **FIRM AND IRREVOCABLE PURCHASE COMMITMENTS** | **51,578** | **9,071** | **17,502** | **14,652** | **10,353** | **53,481** |

*(1) Excluding Edison (see note 12.1.2).*

The changes result essentially from changes in the scope of consolidation and the decrease in market prices in 2009.

### 12.1.1 Electricity purchases

Electricity purchase commitments mainly concern EnBW and EDF, and are mostly for Island Energy Systems (IES), which has made commitments to purchase the electricity generated using bagasse and coal by ERDF, EDF Energy and RTE EDF Transport.

In addition to the obligations reported above and under article 10 of the law of February 10, 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines and small hydro-electric plants, etc.). The additional costs generated by this obligation are offset, after validation by the CRE, by the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* or CSPE) introduced by the law of January 3, 2003. The purchase obligations covered by the CSPE total 28 TWh for 2009 (26.7 TWh for 2008), including 13 TWh for co-generation (14 TWh for 2008), 8 TWh for wind power (5.1 TWh for 2008) and 4 TWh for hydropower.

### 12.1.2 Gas purchases

Gas purchase commitments are principally undertaken by EnBW and EDF in connection with the expansion of their gas supply businesses. The decrease in these commitments primarily results from price-indexing effects and termination of the BE ZRt supply contract.

Edison has entered into "take or pay" gas import contracts for final total capacity of 18 billion cubic meters ($m^3$) a year once all contracts are in operation. The contracts already in operation concern imports from Russia, Libya, Algeria, Qatar and Norway, for total supplies of 15.8 billion $m^3$ per year. A contract for a total volume of 2 billion $m^3$ per year from Algeria will also come into force in the next few years.

The contract with Terminale GNL Adriatico, a gas liquefaction unit in which Edison has a 10% holding and which started operation in October 2009, stipulates the following:

- the obligation for Edison to retain its investment until July 1, 2011 at the latest;
- the other shareholders' right to buy out Edison's 10% holding in the event Edison ends the supply contract with Rasgas, at a price corresponding to the sum of capital contributions made at the date the purchase option is exercised;
- Edison is to benefit from approximately 80% of the terminal's regasification capacities for a 25-year period.

The Group is involved in independent power plant (IPP) ventures under power purchase agreements (PPA). Gas purchase commitments are mostly related to electric IPPs, covered by electricity purchase agreements received. These agreements include "pass-through" clauses allowing almost all fluctuations in supply source costs to be passed on to the customer.

### 12.1.3 Other energy and commodity purchases

Purchase commitments for other energies and commodities mainly concern coal and oil used to operate the fossil-fired plants.

### 12.1.4 Nuclear fuel purchases

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants intended to cover the EDF group's needs for nuclear fuel and fluoration, enrichment and fuel assembly production services. For EDF, the change over the year results from termination of contracts identified at December 31, 2009 and inclusion of commitments related to British Energy and CENG, and also from revaluation of uranium supply costs.

## 12.2 Electricity supply commitments

EDF has signed several long-term contracts with a number of European electricity operators, undertaking to supply electricity. These contracts are of two types:

- co-financing agreements for nuclear power plants, either for a specific plant or for a defined group of plants. Companies participating in this financing are entitled to a share of the power generated by the plants concerned, in proportion to their initial contribution;
- long-term commercial sales contracts, generally covered by the nuclear power plants.

When it invested in EnBW in 2001, EDF made a commitment to the European Commission to make some of its generation capacity available to the market for an initial duration of 5 years, in principle until February 7, 2006. The purpose of this arrangement was to facilitate competitors' access to the French market, to make up for supply difficulties on the emerging French market over the early years.
Since February 2006, EDF has had the right to file a documented application to withdraw from this auction procedure, but has chosen not to exercise this right to date. After discussions with the European Commission and upon a proposal by EDF, the Commission authorized certain adjustments to the auction process, primarily by introduction of baseload products for a period of 4 years, on sale since September 2006, although the volume of energy made available annually by EDF is unchanged.
In 2009, close to 38 TWh was made available to the market (43 TWh in 2008). The auction procedure is still in operation, on a quarterly basis.

On December 22, 2008, the European Commission approved Lake Acquisitions Ltd.'s takeover of British Energy subject to similar conditions concerning the sale of between 5 and 10 TWh of electricity on the market between 2012 and 2015. Also, under agreements concluded by EDF with Centrica in May 2009, EDF will supply an additional 18 TWh of electricity to Centrica at market prices, for a 5-year period starting from 2011 (see note 5.1.5 and 5.1.6).

Finally, following the dispute between EDF and Direct Énergie, the French competition authorities (*Conseil de la concurrence*) issued a ruling on December 10, 2007 accepting EDF's proposed commitments to tender a significant capacity of electricity (1,500 MW, i.e. approximately 10 TWh per year for 15 years) to alternative suppliers at prices enabling them to compete effectively with EDF's offers on the deregulated mass market.

For the initial 5-year period, 2008-2012, EDF proposed to apply an average baseload supply price of €39.4/MWh in current Euros in 2009 (€36.8/MWh in 2008) with progressive rises to reach €47.2/MWh in 2012. For the second 10-year period, the price has been fixed at a level that covers EDF's development costs for the Flamanville EPR.

EDF thus undertook three calls for tender for baseload electricity supply contracts on March 12, 2008, November 19, 2008 and November 18, 2009. The contracts concerned cover a total of 500 MW each, for periods of up to fifteen years. All 1,500 MW available were subscribed in these three tenders.

# 12.3 Operating contract commitments and guarantees

## 12.3.1 Operating contract performance commitments

In the course of its business, the Group provides contract performance guarantees, generally through the intermediary of banks. The Group has also given and received commitments jointly with third parties, maturing as follows at December 31, 2009:

| | 12.31.2009 | | | | 12.31.2008 |
|---|---|---|---|---|---|
| | Total | Maturity | | | Total |
| *(in millions of Euros)* | | < 1 year | 1 - 5 years | > 5 years | |
| Satisfactory performance, completion and bid guarantees | 1,297 | 620 | 638 | 39 | 1,451 |
| Commitments related to orders for operating items* | 4,562 | 2,360 | 1,655 | 547 | 4,172 |
| Commitments related to orders for fixed assets | 10,406 | 5,223 | 4,868 | 315 | 11,339 |
| Other operating commitments | 3,859 | 1,204 | 2,160 | 495 | 4,802 |
| **OPERATING COMMITMENTS GIVEN** | **20,124** | **9,407** | **9,321** | **1,396** | **21,764** |
| **OPERATING COMMITMENTS RECEIVED** | **9,165** | **4,990** | **3,809** | **366** | **7,564** |

**Excluding raw materials and energy.*

Satisfactory performance, completion and bid guarantees at December 31, 2009 mainly consist of guarantees given by EDF Énergies Nouvelles (€859 million) in connection with its development projects. The Group has also given other guarantees totaling €437 million, principally by Dalkia International and EDF.

Firm commitments on operating orders other than commodity and energy purchases and commitments for purchases of property, plant and equipment amount to €14,968 million (compared to €15,512 million at December 31, 2008).

The main such commitments concern:

- EDF and ERDF (€7,326 million in 2009, €7,945 million at December 31, 2008): commitments of €4,666 million undertaken upon signature of capital asset orders (€5,385 million at December 31, 2008), including €1,107 million for construction of the future EPR-type nuclear plant at Flamanville in France (€1,743 million in 2008);
- island electricity generation (€1,161 million): commitments mainly undertaken for nuclear plant construction;
- RTE EDF Transport €1,137 million, (€1,019 million at December 31, 2008);
- EDF Energy (€1,425 million, €1,187 million at December 31, 2008): commitments for construction of a CCG plant and networks;
- Edison (€200 million, €785 million at December 31, 2008); most of the decrease results from acquisition of the Abu Qir gas concession in January 2009 (see note 7.1);
- EDF Énergies Nouvelles (EEN) (€2,404 million, €2,169 million at December 31, 2008);
- EnBW (€618 million, €875 million at December 31, 2008).

Other operating commitments mainly concern:

- the solidarity commitment undertaken by operators of nuclear power plants in Germany, which would come into force in the event of any one of them being unable to meet its obligations following a nuclear incident. The amount consolidated by the EDF group through EnBW amounts to €1,034 million (€1,034 million at December 31, 2008);
- Edison €736 million (€613 million in 2008);
- EDF Trading €472 million (€1,688 million in 2008) for bank guarantees provided to various counterparties in the course of its trading business.

Commitments received mainly concern EDF, and are mostly commitments from insurance companies to cover risks related to construction of the EPR-type nuclear plant. They total €2,843 million at December 31, 2009 and 2008.

### 12.3.2 Partnership agreement between EDF and Enel

On November 30, 2007, EDF and Enel signed a strategic partnership agreement, under which Enel bears a 12.5% share of all construction, operation, decommissioning and back-end nuclear cycle expenses for the Flamanville EPR-type nuclear plant, in return for access to 12.5% of the electricity generated by the EPR over its lifetime. The plant's nuclear operator is EDF, which bears full responsibility for its operations.

The partnership agreement also gives Enel the option of progressively acquiring the electricity generated by EDF's nuclear plants, up to a total capacity of 1,200 MW.

EDF and Enel entered into two industrial agreements in February 2009 for the development of nuclear power, following the agreement of November 2007.
On August 3, 2009, they formed a 50/50 joint venture named "Sviluppo Nucleare Italia SRL" to carry out feasibility studies for construction of at least four EPRs in Italy, in compliance with the first agreement between the two groups.
The second agreement extends Enel's involvement in France's new nuclear program, including the new EPR at Penly.

## 12.4 Operating lease commitments

The Group is a party to agreements classified as operating leases under IFRIC 4, which account for most of its operating lease commitments as lessor. These agreements mainly concern the Asian IPPs, and also the tolling contract signed by EDF Energy and various partners for the Sutton Bridge plant.

The Group is also committed as lessee to irrevocable operating lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts. EDF, EDF Energy and EDF Trading are the principal entities concerned.

At December 31, 2009, the total expenses and commitments for irrevocable lease payments are as follows:

| | 12.31.2009 | | | | 12.31.2008 |
|---|---|---|---|---|---|
| | Total | Maturity | | | Total |
| *(in millions of Euros)* | | < 1 year | 1 - 5 years | > 5 years | |
| Operating lease commitments as lessor | 2,330 | 529 | 1,334 | 467 | 1,662 |
| Operating lease commitments as lessee | 2,461 | 534 | 1,382 | 545 | 2,593 |

# Note 13 Personnel expenses



## 13.1 Personnel expenses

Personnel expenses comprise:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Wages and salaries | (7,670) | (6,976) |
| Social contributions | (1,527) | (1,451) |
| Employee profit sharing | (284) | (244) |
| Non monetary benefits | (344) | (365) |
| Other expenses linked to short-term benefits | (269) | (238) |
| **Short-term benefits** | **(10,094)** | **(9,274)** |
| Expenses under defined benefit plans | (770) | (816) |
| Expenses under defined contribution plans | (488) | (402) |
| **Post-employment benefits** | **(1,258)** | **(1,218)** |
| Other long-term expenses | (95) | 24 |
| Termination payments | (5) | (8) |
| **Other personnel expenses** | **(100)** | **16** |
| **PERSONNEL EXPENSES** | **(11,452)** | **(10,476)** |

A free share plan (named ACT 2007) was approved by the General Shareholders' Meeting of May 24, 2007. As the required performance targets for 2006-2008 were achieved, the shares were delivered to beneficiary employees on August 31, 2009.

## 13.2 Average workforce

| | 2009 | 2008 |
|---|---|---|
| IEG status | 102,986 | 102,689 |
| Other | 61,264 | 53,242 |
| **TOTAL** | **164,250** | **155,931** |

Average workforce numbers are reported on a full-time equivalent basis.
Personnel corresponding to proportionally consolidated companies included *pro rata* with the Group's percentage interest represent the equivalent of 28,540 full-time employees at December 31, 2009 (28,204 full-time equivalent employees at December 31, 2008).

# Note 14 Taxes other than income taxes

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Payroll taxes | (208) | (201) |
| Energy taxes | (898) | (953) |
| Other non-income taxes | (2,140) | (2,021) |
| Net increase to provisions for taxes other than income taxes | 329 | 4 |
| **TAXES OTHER THAN INCOME TAXES** | **(2,917)** | **(3,171)** |

Net increases to provisions for taxes other than income taxes include €329 million reversed from a provision established to cover EDF's share of the expenses relating to future work programs adopted by the *Fonds d'Amortissement des Charges d'Électrification* (FACE) (sinking fund for electrification charges). This reversal results from application on August 1, 2009 of the new network access tariff (TURPE 3) which explicitly covers taxes paid by the EDF group for future financing of the FACE.

The creation of the Local Economic Contribution (*Contribution Économique Territoriale*) in the business tax reform introduced by the French Finance law for 2010 does not affect the 2009 financial statements. This contribution, like business tax, will be recorded under "Taxes other than income tax" in the consolidated accounts.

# Note 15 Other operating income and expenses

Other operating income and expenses comprise:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Operating subsidies | 2,758 | 1,898 |
| Provision for electricity generators' contribution to the TaRTAM [1] | - | (17) |
| Net income on deconsolidation | 45 | 61 |
| Gains on disposal of property, plant and equipment | (70) | (46) |
| Net increase in provisions on current assets | (185) | (111) |
| Net increase in provisions for operating contingencies and losses [2] | 558 | 352 |
| Other operating income and expenses | 182 | (54) |
| **OTHER OPERATING INCOME AND EXPENSES** | **3,288** | **2,083** |

*(1) Transition tariff (Tarif réglementé transitoire d'ajustement de marché): the hydro-nuclear tax is presented net of reversals from the relevant provisions.*

*(2) Including reversals of negative fair value on British Energy contracts.*

Operating subsidies mainly comprise the subsidy received by EDF in respect of the Contribution to the Public Electricity Service (CSPE) introduced by the French law of January 3, 2003. This contribution is payable by end-users (both eligible and non-eligible) and collected by network operators or electricity suppliers, which then pay it to the State. Since January 1, 2005, the additional costs resulting from the basic necessity tariff (*tarif de première nécessité*) and the poverty and vulnerability action measures are also included in subsidies.

In the financial statements, this compensation results in recognition of income of €2,678 million for 2009 (€1,876 million for 2008). This increase is due to the decline in market prices for electricity between the two periods.
The CSPE income receivable is valued on the basis of the most probable assumptions assessed at December 31, 2009.

The net increase to provisions for 2009 include €424 million corresponding to reversals of negative fair value on British Energy commodity sales contracts recognized at the acquisition date of January 5, 2009 (see note 5.1).

Other operating income and expenses for 2008 include the effects of:
- non-recurring services by EDF totaling €171 million (income);
- the administrative court ruling of July 4, 2008 in the litigation between RTE EDF Transport and the SNCF over the rental due for use of the high-voltage electricity network which previously belonged to SNCF. RTE has decided to appeal against this decision and apply for suspended execution (expense);
- expiry on December 17, 2008 of a index-linked storm-damage insurance policy. Under the terms of this policy, a portion of the premiums paid was recoverable. Since no storm had exceeded the indemnification level during the period covered by the insurance, the reserve was repaid to ERDF and recognized as other operating income of €137 million.

Operations of an unusual amount or nature are reported in "Other income and expenses" (see note 18).

# Note 16 Prolongation of the transition tariff system (TaRTAM) – law of August 4, 2008

The law of December 7, 2006 introduced a transition tariff (*tarif réglementé transitoire d'ajustement du marché* or TaRTAM). This tariff was automatically applicable in mainland France for two years from the date of initial application for all end-users of electricity, provided they made a formal request to their supplier by July 1, 2007. The decision of January 3, 2007 states that this transition tariff is equal to the regulated sales tariff, excluding taxes, plus 10%, 20% or 23% depending on the type of end-user electing to benefit from the transition tariff.

Suppliers providing customers with electricity at this tariff at the customer's request, even though they are unable to generate or purchase the electricity supplied at a lower rate, receive compensation for the differential between the cost of the electricity supplied and the income corresponding to supply at the transition tariff.

This compensation paid to electricity suppliers is financed by a share of the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* or CSPE), and a contribution paid by nuclear and hydropower generators who exceed certain generation levels (this includes EDF), up to the limit of €3/MWh (set at €2.6/MWh for 2009). The amount of the electricity generators' contribution is calculated such that, taken together with the CSPE, it covers all expenses borne by suppliers.

The transition tariff system (*tarif réglementé transitoire d'ajustement du marché* or TaRTAM) was prolonged to June 2010 in application of the law of August 4, 2008 on economic modernization. As a result, an additional provision of €1,263 million was recorded at December 31, 2008 to cover EDF's contribution to electricity supplier compensation in 2009 and 2010. As explained in note 3.2.7, this amount was estimated based on the Group's best available information and forecasts, using a series of assumptions that may be subject to unforeseeable developments. It is partially offset (€68 million) by reinvoicing of charges passed on to partners in the nuclear plants.

The same law also extended eligibility for the transition tariff to all final customers, even those who had not yet opted into the system.

# Note 17 Impairment / reversals

Details of impairment recognized and reversed are as follows:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Impairment on goodwill | (4) | - |
| Impairment on property, plant and equipment | (65) | (218) |
| Reversals | 3 | 103 |
| **IMPAIRMENT NET OF REVERSALS** | **(66)** | **(115)** |

The net-of-tax weighted average cost of capital referred to for impairment tests was in the following ranges:

- 4.7% to 4.9% for regulated activities in the Euro zone (4.7% to 4.9% in 2008);
- 6.6% to 7% for deregulated activities in the Euro zone (7% to 7.4% in 2008);
- 6.3% to 8.5% in Europe outside the Euro zone (6.5% to 9.7% in 2008).

In general, a growth rate to infinity of 2% is applied to the normalized flows used to determine terminal values.

The regulated activities are more sensitive to changes in interest rates, in view of their net-of-tax weighted average cost of capital.

The Group has not identified any cases where a probable movement in one of the key assumptions (*e.g.* electricity prices, weighted average cost of capital) could lead to significant additional impairment of goodwill allocated to the Cash-generating units.

Most impairment in 2009 concerns:

- Edison: €(27) million;
- EnBW: €(17) million;
- Fenice: €(16) million.

Changes in this item in 2008 mainly concern:

- reversals of impairment on property, plant and equipment of the Polish companies Ersa (Rybnik) and Kogeneracja (€87 million) following the long-term improvement in the financial position of these companies with the recovery of electricity prices in Poland;
- reversals of impairment on turbines located in Brazil due to their disposal;
- recognition of impairment on Edison's CIP6 power plants;
- recognition of impairment of €(166) million on EnBW's network assets after the reduction in transmission network access fees.

# Note 18 Other income and expenses

The heading "Other income and expenses" presented below the operating profit before depreciation and amortization comprises items of an unusual nature or amount.

Other income and expenses for 2009 amount to €173 million, mainly corresponding to:

- the €320 million gain on EDF's contribution to Alpiq of its 50% share in power and energy drawing rights in the Emosson dam (see note 6.1.3);
- and expenses of €(121) million incurred in connection with the CENG transaction (see note 5.3).

In 2008, other income and expenses show a net gain of €25 million. The major component is the non-recurring €34 million impact of the IEG pension reform in France.

# Note 19 Financial result



## 19.1 Cost of gross financial indebtedness

Details of the components of the cost of gross financial indebtedness are as follows:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Interest expenses on financing operations | (2,679) | (1,684) |
| Change in the fair value of derivatives and hedges of liabilities | (9) | (6) |
| Transfer to income of changes in the fair value of cash flow hedges | (10) | 16 |
| Net foreign exchange gain on indebtedness | (11) | 17 |
| **COST OF GROSS FINANCIAL INDEBTEDNESS** | **(2,709)** | **(1,657)** |

The rise in interest expenses on financing operations mainly results from the increase in debt in 2009 associated with the acquisitions of British Energy, CENG and SPE.

# 19.2 Discount expense

The discount expense primarily concerns provisions for the back-end nuclear cycle, decommissioning and last cores, and provisions for long-term and post-employment employee benefits.

The increase results essentially from the effect of first consolidation of British Energy €(379) million. In 2009, it also reflects the change in the discount rate at December 31, 2008 for French companies' employee benefit provisions (from 5% to 5.75%).

Details of this expense are as follows:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Provisions for employee benefits | (1,461) | (1,228) |
| Provisions for back-end nuclear cycle, decommissioning and last cores | (1,599) | (1,520) |
| Other provisions | (169) | (49) |
| **DISCOUNT EXPENSE** | **(3,229)** | **(2,797)** |

# 19.3 Other financial income and expenses

Other financial income and expenses comprise:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Financial income on cash and cash equivalents | 46 | 188 |
| Gains (losses) on available-for-sale financial assets | 272 | 547 |
| Gains (losses) on other financial assets | 320 | 351 |
| Changes in financial instruments carried at fair value with changes in fair value included in income | 30 | (155) |
| Other financial expenses | (85) | (81) |
| Foreign exchange gain/loss on financial items other than debts | (2) | (83) |
| Return on hedging assets | 634 | 520 |
| Capitalized borrowing costs (1) | 198 | 117 |
| **OTHER FINANCIAL INCOME AND EXPENSES** | **1,413** | **1,404** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

Gains net of expenses on available-for-sale financial assets include gains on disposals, interest income, and dividends.

In 2009, other financial income and expenses principally include:
- reimbursement by the French state of €335 million of interest following cancellation of the European Commission decision;
- additional impairment of €232 million on shares in CEG (see note 5.3.6);

In 2008, they included impairment of €156 million recognized against shares in CEG.

Changes in financial instruments carried at fair value with changes in fair value taken to income primarily related in 2008 to losses on fair value measurement of financial instruments affected by the situation on the financial markets.

# Note 20 Income taxes



## 20.1 Breakdown of tax liability

Details are as follows:

| *(in millions of Euros)* | 2009 | 2008 (1) |
|---|---|---|
| Current tax expense | (1,645) | (1,534) |
| Deferred taxes | 31 | (65) |
| **TOTAL** | **(1,614)** | **(1,599)** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

In 2009, €(745) million of the current tax expense relates to EDF's tax consolidated group, and €(900) million to other subsidiaries (€(725) million and €(809) million respectively in 2008).

Deferred taxes for 2008 include the effect of the phasing out of Industrial Buildings Allowances in the UK under the country's 2008 finance law (€(34) million), and the impacts of additional taxes on energy sector companies in Italy.

# 20.2 Reconciliation of the theoretical and effective tax expense

## 20.2.1 Reconciliation of the theoretical and effective tax rate

| *(in millions of Euros)* | 2009 | 2008 (1) |
|---|---|---|
| **Income of consolidated companies before tax** | **5,582** | **4,860** |
| Goodwill impairment | 4 | - |
| **Income of consolidated companies before tax and goodwill impairment** | **5,586** | **4,860** |
| **Theoretical tax expense** | **(1,923)** | **(1,673)** |
| Differences in tax rate | 167 | 46 |
| Permanent differences | 91 | (69) |
| Taxes without basis | 15 | 62 |
| Net depreciation of deferred tax assets | 79 | 2 |
| Other | (43) | 33 |
| **Actual tax expense** | **(1,614)** | **(1,599)** |
| **EFFECTIVE TAX RATE** | **28.89%** | **32.91%** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

The main factors explaining the difference between the French tax rate (34.43%) and the effective rate are:

- 2009:
  - optimization of financing for the takeover of British Energy (€74 million),
  - a net reversal from provisions on deferred tax assets, essentially for French companies (€79 million),
  - the positive impact of differences in tax rates applicable to foreign subsidiaries (€167 million);
- 2008:
  - the adjustment of deferred taxes following changes in tax rules during the year in the UK and Italy (€(118) million),
  - the positive impact of the French research tax credit reform (€38 million),
  - the positive impact of differences in the tax rate applicable to foreign subsidiaries (€164 million).

## 20.2.2 Change in deferred taxes

| *(in millions of Euros)* | Deferred tax assets | Provision on deferred tax assets | Net deferred tax assets | Deferred tax liabilities | Net deferred taxes |
|---|---|---|---|---|---|
| **Situation at December 31, 2007** | **2,858** | **(1,249)** | **1,609** | **(4,435)** | **(2,826)** |
| **IAS 23 Impacts** | **(3)** | **-** | **(3)** | **(20)** | **(23)** |
| **Situation at December 31, 2007 restated** | **2,855** | **(1,249)** | **1,606** | **(4,455)** | **(2,849)** |
| Change in tax basis (1) | 1,402 | 42 | 1,444 | (287) | 1,157 |
| Change in scope of consolidation | 105 | (1) | 104 | (6) | 98 |
| Translation adjustments | (256) | 2 | (254) | 614 | 360 |
| **Situation at December 31, 2008** | **4,106** | **(1,206)** | **2,900** | **(4,134)** | **(1,234)** |
| Change in tax basis | (445) | 46 | (399) | 211 | (188) |
| Change in scope of consolidation | 502 | 3 | 505 | (3,414) | (2,909) |
| Translation adjustments | 92 | 1 | 93 | (315) | (222) |
| **SITUATION AT DECEMBER 31, 2009** | **4,255** | **(1,156)** | **3,099** | **(7,652)** | **(4,553)** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

In 2009, the €(188) million change in the tax bases has an impact of €31 million on income and €(219) million on equity.

In 2008, the €1,157 million change in the tax bases has an impact of €(65) million on income and €1,435 million on equity.

# 20.3 Breakdown of deferred tax assets and liabilities by nature

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 (1) |
|---|---|---|
| **Deferred tax assets:** | | |
| Differences between depreciation recorded for accounting and tax purposes | 968 | 977 |
| Non-deductible provisions for pensions obligations | 3,898 | 3,863 |
| Other non-deductible provisions | 786 | 908 |
| Other deductible temporary differences | 2,430 | 2,331 |
| Revaluations, revaluation surplus and elimination of intercompany profit | 463 | 485 |
| Tax losses and unused tax credits | 268 | 47 |
| Netting of deferred tax assets and liabilities | (4,558) | (4,505) |
| **Deferred tax assets - gross value** | **4,255** | **4,106** |
| Provision on deferred tax assets | (1,156) | (1,206) |
| **Deferred tax assets - net value** | **3,099** | **2,900** |
| **Deferred tax liabilities:** | | |
| Differences between depreciation recorded for accounting and tax purposes | (8,424) | (5,304) |
| Other deductible temporary differences | (2,525) | (2,374) |
| Revaluations, revaluation surplus and elimination of intercompany profit | (1,261) | (959) |
| Netting of deferred tax assets and liabilities | 4,558 | 4,503 |
| **Deferred tax liabilities** | **(7,652)** | **(4,134)** |
| **NET DEFERRED TAXES** | **(4,553)** | **(1,234)** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

# 20.4 Losses carried forward and tax credits

At December 31, 2009, tax loss carryforwards and unrecorded deferred tax assets represent a potential tax saving of €1,156 million (€1,206 million at December 31, 2008). Most of this tax saving lies in deferred tax assets related to employee benefits in France.

# 20.5 Tax recorded against equity

The total tax recorded against components of equity during 2009 amounts to €335 million (€1,435 million in 2008), corresponding principally to:

- €889 million following cancellation of the decision by the European Commission;
- €6 million related to changes in the fair value of available-for-sale financial assets and hedging instruments at December 31, 2009;
- €(486) million related to transfers of these items to income (see notes 27.3.2 and 41.4).

# Note 21 Goodwill

Goodwill on consolidated entities comprises the following:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| **Net book value at opening date** | **6,807** | **7,266** |
| Acquisitions | 6,524 | 138 |
| Disposals | - | (8) |
| Impairment | (4) | (4) |
| Translation adjustments | 448 | (580) |
| Other movements | (249) | (5) |
| **NET BOOK VALUE AT CLOSING DATE** | **13,526** | **6,807** |
| Gross value at closing date | 14,364 | 7,641 |
| Accumulated impairment at closing date | (838) | (834) |

The breakdown of goodwill is as follows:

| *(in millions of Euros)* | United Kingdom | Germany | Italy | Other international | Other activities | Total |
|---|---|---|---|---|---|---|
| **AT DECEMBER 31, 2009** | **7,831** | **1,387** | **2,026** | **786** | **1,496** | **13,526** |
| At December 31, 2008 | 1,786 | 1,405 | 2,020 | 160 | 1,436 | 6,807 |

The increase in goodwill in 2009 primarily relates to the external growth operations undertaken:

- in the UK with the takeover of British Energy for £5,234 million (€5,894 million);
- in Belgium in connection with acquisition of 51% of SPE for €480 million;
- in the US with acquisition of 49.99% of CENG for $17 million (€11 million).

The calculation methods are described in notes 5.1, 5.2 and 5.3 respectively.

Goodwill on CENG and SPE is stated at its provisional value at December 31, 2009.

# Note 22 Other intangible assets



The net value of other intangible assets breaks down as follows:

## 22.1 At December 31, 2009

| *(in millions of Euros)* | 12.31.2008 | Acquisitions | Disposals | Exchange adjustments | Translation adjustments | Other movements | 12.31.2009 |
|---|---|---|---|---|---|---|---|
| Greenhouse gas emission rights – Green Certificates | 552 | 707 | (675) | 24 | 174 | (74) | 708 |
| Other intangible assets | 4,188 | 1,153 | (216) | 53 | 1,740 | (219) | 6,699 |
| **Gross values** | **4,740** | **1,860** | **(891)** | **77** | **1,914** | **(293)** | **7,407** |
| Accumulated amortization | (1,641) | (477) | 200 | (12) | (26) | 4 | (1,952) |
| **NET VALUES** | **3,099** | **1,383** | **(691)** | **65** | **1,888** | **(289)** | **5,455** |

## 22.2 At December 31, 2008

| *(in millions of Euros)* | 12.31.2007 | IAS 23 Impact | Acquisitions | Disposals | Exchange adjustments | Translation adjustments | Other movements | 12.31.2008 |
|---|---|---|---|---|---|---|---|---|
| Greenhouse gas emission rights - Green Certificates | 228 | - | 667 | (342) | (69) | - | 68 | 552 |
| Other intangible assets | 3,581 | 23 | 579 | (62) | (68) | 104 | 31 | 4,188 |
| **Gross values** | **3,809** | **23** | **1,246** | **(404)** | **(137)** | **104** | **99** | **4,740** |
| Accumulated amortization | (1,388) | - | (391) | 60 | 47 | (1) | 32 | (1,641) |
| **NET VALUES** | **2,421** | **23** | **855** | **(344)** | **(90)** | **103** | **131** | **3,099** |

Shortfalls in greenhouse gas emission rights are covered by a provision for risk (see note 37.3).

EDF's research and development expenses recorded in the income statement total €438 million for the year ended December 31, 2009.

The increase in other intangible assets includes €495 million of assets related to the Abu Qir gasfields purchased by Edison in January 2009 (see note 7.1).

The principal changes in the scope of consolidation concern:
- British Energy (€717 million, see note 5.1.4);
- the Lippendorf and Bexbach plants (€192 million);
- SPE and CENG.

# Note 23 Property, plant and equipment operated under French public electricity distribution concessions



## 23.1 Net value of property, plant and equipment operated under French public electricity distribution concessions

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Property, plant and equipment | 41,131 | 40,253 |
| Property, plant and equipment in progress | 1,020 | 960 |
| **PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS** | **42,151** | **41,213** |

# 23.2 Movements in property, plant and equipment operated under French public electricity distribution concessions (excluding assets in progress)

| *(in millions of Euros)* | Land & Buildings | Fossil-fired & hydropower plants | Networks | Other installations, plant, machinery, equipment & other | Total |
|---|---|---|---|---|---|
| **Gross values at 12.31.2007** | **2,060** | **11** | **61,145** | **2,770** | **65,986** |
| Increases [1] | 46 | - | 3,245 | 202 | 3,493 |
| Decreases | (35) | - | (321) | (194) | (550) |
| Translation adjustment | - | - | - | - | - |
| Changes in the scope of consolidation | - | - | - | - | - |
| Other movements | 47 | (1) | 13 | 27 | 86 |
| **Gross values at 12.31.2008** | **2,118** | **10** | **64,082** | **2,805** | **69,015** |
| Increases [1] | 56 | 2 | 2,951 | 241 | 3,250 |
| Decreases | (106) | - | (404) | (158) | (668) |
| Translation adjustment | - | - | - | - | - |
| Changes in the scope of consolidation | - | - | - | - | - |
| Other movements | - | 2 | 2 | (1) | 3 |
| **Gross values at 12.31.2009** | **2,068** | **14** | **66,631** | **2,887** | **71,600** |
| **Depreciation and impairment at 12.31.2007** | **(1,137)** | **(2)** | **(24,149)** | **(2,007)** | **(27,295)** |
| Net depreciation | (33) | - | (151) | (100) | (284) |
| Disposals | 35 | - | 257 | 193 | 485 |
| Translation adjustment | - | - | - | - | - |
| Changes in the scope of consolidation | - | - | - | - | - |
| Other movements [2] | (40) | (1) | (1,559) | (68) | (1,668) |
| **Depreciation and impairment at 12.31.2008** | **(1,175)** | **(3)** | **(25,602)** | **(1,982)** | **(28,762)** |
| Net depreciation | (33) | - | (158) | (102) | (293) |
| Disposals | 92 | - | 322 | 156 | 570 |
| Translation adjustment | - | - | - | - | - |
| Changes in the scope of consolidation | - | - | - | - | - |
| Other movements [2] | (10) | (5) | (1,604) | (65) | (1,684) |
| **Depreciation and impairment at 12.31.2009** | **(1,126)** | **(8)** | **(27,042)** | **(1,993)** | **(30,169)** |
| **Net values at 12.31.2007** | **923** | **9** | **36,996** | **763** | **38,691** |
| **Net values at 12.31.2008** | **943** | **7** | **38,480** | **823** | **40,253** |
| **NET VALUES AT 12.31.2009** | **942** | **6** | **39,589** | **894** | **41,431** |

*(1) Increases also include assets contributed for nil consideration.*

*(2) Other movements mainly concern depreciation of assets operated under concession, booked against amortization recorded in the special concession liabilities.*

# Note 24 Property, plant and equipment operated under concessions for other activities



## 24.1 Net value of property, plant and equipment operated under concessions for other activities

The net value of property, plant and equipment operated under concessions for other activities breaks down as follows:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 (1) |
|---|---|---|
| Property, plant and equipment | 26,982 | 25,996 |
| Property, plant and equipment in progress | 1,269 | 963 |
| **PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER CONCESSIONS FOR OTHER ACTIVITIES** | **28,251** | **26,959** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

# 24.2 Movements in property, plant and equipment operated under concessions for other activities (excluding construction in progress and finance-leased assets)

| *(in millions of Euros)* | Land & Buildings | Fossil-fired & hydropower plants | Networks | Other installations, plant, machinery, equipment & other | Total |
|---|---|---|---|---|---|
| **Gross values at 12.31.2007** | **3,750** | **8,916** | **30,019** | **1,972** | **44,657** |
| Increases | 92 | 132 | 1,747 | 349 | 2,320 |
| Decreases | (19) | (30) | (146) | (87) | (282) |
| Translation adjustment | (116) | 20 | (2,324) | (28) | (2,448) |
| Changes in the scope of consolidation | - | - | 5 | (1) | 4 |
| Other movements (1) | 45 | (12) | 629 | (7) | 655 |
| **Gross values at 12.31.2008** | **3,752** | **9,026** | **29,930** | **2,198** | **44,906** |
| Increases | 93 | 204 | 1,765 | 134 | 2,196 |
| Decreases | (7) | (18) | (176) | (39) | (240) |
| Translation adjustment | 33 | (9) | 586 | 6 | 616 |
| Changes in the scope of consolidation | (178) | (39) | - | (35) | (252) |
| Other movements | - | (3) | (576) | 9 | (570) |
| **Gross values at 12.31.2009** | **3,693** | **9,161** | **31,529** | **2,273** | **46,656** |
| **Depreciation and impairment at 12.31.2007** | **(1,848)** | **(4,479)** | **(10,557)** | **(1,383)** | **(18,267)** |
| Net depreciation | (82) | (230) | (891) | (88) | (1,291) |
| Disposals | 12 | 18 | 115 | 80 | 225 |
| Translation adjustment | 32 | (7) | 473 | (10) | 488 |
| Changes in the scope of consolidation | - | - | 1 | 1 | 2 |
| Other movements (1) | (2) | (1) | (71) | 7 | (67) |
| **Depreciation and impairment at 12.31.2008** | **(1,888)** | **(4,699)** | **(10,930)** | **(1,393)** | **(18,910)** |
| Net depreciation | (82) | (236) | (803) | (95) | (1,216) |
| Disposals | 7 | 12 | 135 | 36 | 190 |
| Translation adjustment | (9) | 2 | (116) | 7 | (116) |
| Changes in the scope of consolidation | 71 | 36 | - | 13 | 120 |
| Other movements | (3) | 4 | 257 | - | 258 |
| **Depreciation and impairment at 12.31.2009** | **(1,904)** | **(4,881)** | **(11,457)** | **(1,432)** | **(19,674)** |
| **Net values at 12.31.2007** | **1,902** | **4,437** | **19,462** | **589** | **26,390** |
| **Net values at 12.31.2008** | **1,864** | **4,327** | **19,000** | **805** | **25,996** |
| **NET VALUES AT 12.31.2009** | **1,789** | **4,280** | **20,072** | **841** | **26,982** |

*(1) Including reclassifications amounting to €555 million in the United Kingdom (see note 25.2).*

The 2009 translation adjustments essentially affected the UK, reflecting the rise in the pound sterling between December 31, 2008 and December 31, 2009.

Property, plant and equipment operated under concessions other than French public electricity distribution concessions comprises concession facilities mainly located in France (transmission and hydropower), the UK, Germany and Italy.

# Note 25 Property, plant and equipment used in generation and other tangible assets owned by the Group



## 25.1 Net value of property, plant and equipment used in generation and other tangible assets owned by the Group

The net value of property, plant and equipment used in generation and other tangible assets owned by the Group breaks down as follows:

| *(in millions of Euros)* | **12.31.2009** | 12.31.2008 (1) |
|---|---|---|
| Property, plant and equipment owned by the Group | 49,803 | 33,580 |
| Property, plant and equipment in progress | 8,507 | 5,514 |
| Leased property, plant and equipment | 424 | 309 |
| **PROPERTY, PLANT AND EQUIPMENT USED IN GENERATION AND OTHER TANGIBLE ASSETS OWNED BY THE GROUP** | **58,734** | **39,403** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

# 25.2 Movements in property, plant and equipment used in generation and other tangible assets owned by the Group (excluding construction in progress and finance-leased assets)

| (in millions of Euros) | Land & Buildings | Nuclear power plants | Fossil-fired & hydropower plants | Networks | Other installations, plant, machinery, equipment & other | Total |
|---|---|---|---|---|---|---|
| **Gross values at 01.01.2008** | **11,918** | **46,136** | **14,016** | **2,378** | **7,205** | **81,653** |
| IAS 23 Impact | - | - | 2 | - | 12 | 14 |
| **Gross values at 01.01.2008 (1)** | **11,918** | **46,136** | **14,018** | **2,378** | **7,217** | **81,667** |
| Increases | 407 | 709 | 857 | 64 | 1,543 | 3,580 |
| Decreases | (122) | (276) | (56) | (1) | (148) | (603) |
| Translation adjustment | (159) | - | (665) | (30) | (370) | (1,224) |
| Changes in the scope of consolidation | 25 | - | 3 | 2 | 99 | 129 |
| Other movements (2) | (35) | 89 | 19 | (671) | (19) | (617) |
| **Gross values at 12.31.2008 (1)** | **12,034** | **46,658** | **14,176** | **1,742** | **8,322** | **82,932** |
| IAS 23 Impact | - | - | 1 | - | 20 | 21 |
| **Gross values at 12.31.2008 (1)** | **12,034** | **46,658** | **14,177** | **1,742** | **8,342** | **82,953** |
| Increases | 404 | 881 | 760 | 76 | 1,991 | 4,112 |
| Decreases | (92) | (352) | (93) | (42) | (216) | (795) |
| Translation adjustment | 45 | 573 | 144 | 3 | 186 | 951 |
| Changes in the scope of consolidation | 505 | 12,958 | 1,118 | 479 | 286 | 15,346 |
| Other movements | (144) | 47 | (83) | 29 | (109) | (260) |
| **Gross values at 12.31.2009** | **12,752** | **60,765** | **16,023** | **2,287** | **10,480** | **102,307** |
| **Depreciation and impairment at 01.01.2008** | **(5,784)** | **(29,803)** | **(7,586)** | **(938)** | **(3,687)** | **(47,798)** |
| IAS 23 Impact | - | - | - | - | (1) | (1) |
| **Depreciation and impairment at 01.01.2008 (1)** | **(5,784)** | **(29,803)** | **(7,586)** | **(938)** | **(3,688)** | **(47,799)** |
| Net depreciation | (314) | (1,214) | (515) | (125) | (454) | (2,622) |
| Disposals | 75 | 246 | 40 | 6 | 156 | 523 |
| Translation adjustment | 37 | - | 273 | (9) | 161 | 462 |
| Changes in the scope of consolidation | (4) | - | (5) | (1) | (18) | (28) |
| Other movements (2) | 9 | (6) | 7 | 99 | (17) | 92 |
| **Depreciation and impairment at 12.31.2008 (1)** | **(5,981)** | **(30,777)** | **(7,786)** | **(968)** | **(3,860)** | **(49,372)** |
| IAS 23 Impact | - | - | - | - | (1) | (1) |
| **Depreciation and impairment at 12.31.2008 (1)** | **(5,981)** | **(30,777)** | **(7,786)** | **(968)** | **(3,861)** | **(49,373)** |
| Net depreciation | (309) | (1,847) | (650) | (52) | (719) | (3,577) |
| Disposals | 47 | 313 | 98 | 18 | 159 | 635 |
| Translation adjustment | (6) | (1) | (52) | (1) | (62) | (122) |
| Changes in the scope of consolidation | (25) | - | (12) | (283) | (11) | (331) |
| Other movements | 41 | 6 | 13 | 21 | 183 | 264 |
| **Depreciation and impairment at 12.31.2009** | **(6,233)** | **(32,306)** | **(8,389)** | **(1,265)** | **(4,311)** | **(52,504)** |
| **Net values at 01.01.2008 (1)** | **6,134** | **16,333** | **6,432** | **1,440** | **3,529** | **33,868** |
| **Net values at 12.31.2008 (1)** | **6,053** | **15,881** | **6,391** | **774** | **4,481** | **33,580** |
| **NET VALUES AT 12.31.2009** | **6,519** | **28,459** | **7,634** | **1,022** | **6,169** | **49,803** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) Including reclassifications amounting to €555 million in the United Kingdom (see note 24.2).*

Changes in the scope of consolidation mainly reflect the effects of first consolidation of:

- British Energy (€9,388 million);
- CENG (€3,811 million).

Other movements in 2009 include a change in the consolidation method for the windfarms co-financed by EDF Énergies Nouvelles in the US. In order to comply with the predominant practice in the industry, these facilities are fully consolidated from 2009 (in 2008, proportional consolidation was used). The impact on property, plant and equipment at January 1, 2009 amounts to €94 million.

In 2008, following impairment tests the Group recorded net impairment of €115 million on certain items of property, plant and equipment owned by the Group. Most of this impairment concerned EnBW's transmission networks (€(166) million, essentially for gas activities), and it was partly offset by reversals of impairment in Poland (€87 million).

## 25.3 Finance lease obligations

The Group is a party to agreements classified as finance leases under IFRIC 4, which account for almost all of its finance lease commitments as lessor. These agreements mainly concern EDF Energy.

The Group is also bound by irrevocable finance-lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts. The main companies concerned are TIRU and Sofilo.

At December 31, 2009, the total expenses and commitments for irrevocable finance-lease payments were as follows:

| | 12.31.2009 | | | | 12.31.2008 |
|---|---|---|---|---|---|
| | Total | Maturity | | | Total |
| *(in millions of Euros)* | | < 1 year | 1 - 5 years | > 5 years | |
| Financial lease commitments as lessor | 466 | 56 | 239 | 171 | 439 |
| Financial lease commitments as lessee | 219 | 37 | 112 | 70 | 229 |

# Note 26 Investments in companies accounted for under the equity method

Investments in associates are as follows:

| (in millions of Euros) | Principal activity (1) | 12.31.2009 % voting rights held | 12.31.2009 Share of net equity | 12.31.2009 Share of net income | 12.31.2008 Share of net equity | 12.31.2008 Share of net income |
|---|---|---|---|---|---|---|
| Alpiq | G | 26.06 | 1,572 | 92 | 803 | 115 |
| Dalkia Holding | S | 34.00 | 493 | 19 | 521 | 90 |
| EVN | D | 16.46 | 445 | 28 | 478 | 37 |
| Estag | G | 25.00 | - | - | 383 | 32 |
| Taishan | G | 30.00 | 279 | - | - | - |
| Other investments in associates (2) | | | 1,632 | (19) | 667 | 93 |
| **INVESTMENTS IN COMPANIES ACCOUNTED FOR UNDER THE EQUITY METHOD** | | | **4,421** | **120** | **2,852** | **367** |

*(1) S = services, G = generation, D = distribution.*

*(2) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

The principal changes in 2009 result from:

- an increase in EDF's interest in the new entity Alpiq resulting from the operations described in note 6.1.3, which led to a €705 million increase in the share of net equity;
- acquisition by EnBW of 26% of the EWE group for approximately €1 billion. The share of net income includes impairment of €(44) million on EWE shares;
- the change in consolidation method for Estag, which was accounted for under the equity method in 2008 and has been proportionally consolidated since July 2009;
- consolidation of Taishan in 2009.

At December 31, 2008, the main published indicators concerning companies accounted for under the equity method were as follows:

| (in millions of Euros) | Total Assets | Total Liabilities (excluding Equity) | Sales | Net income |
|---|---|---|---|---|
| Alpiq | 7,115 | 4,536 | 8,127 | 462 |
| Dalkia holding (1) | 8,410 | 5,977 | 7,175 | 388 |
| EVN (2) | 6,695 | 3,568 | 2,727 | 198 |
| EWE | 7,228 | 5,296 | 5,646 | 208 |

*(1) Consolidated financial data including Dalkia Investissement and Dalkia International.*

*(2) Data as of September 30, 2009.*

# Note 27 Current and non-current financial assets



## 27.1 Breakdown between current and non-current financial assets

Current and non-current financial assets break down as follows:

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **Current** | **Non-current** | **Total** | Current | Non-current | Total |
| Financial assets carried at fair value with changes in fair value included in income | 4,863 | 13 | **4,876** | 4,831 | 2 | 4,833 |
| Available-for-sale financial assets* | 4,987 | 15,818 | **20,805** | 7,925 | 15,187 | 23,112 |
| Held-to-maturity investments* | 61 | 463 | **524** | 78 | 449 | 527 |
| Positive fair value of hedging derivatives | 1,783 | 1,112 | **2,895** | 2,079 | 1,626 | 3,705 |
| Loans and financial receivables* | 756 | 7,092 | **7,848** | 416 | 839 | 1,255 |
| **FINANCIAL ASSETS** | **12,450** | **24,498** | **36,948** | **15,329** | **18,103** | **33,432** |

**Net of impairment (€911 million in 2009, €530 million in 2008).*

Financial assets carried at fair value mainly concern EDF Trading.

In 2009, available-for-sale financial assets comprise €11,322 million of acquisitions, €11,931 million of disposals and €1,349 million of changes in fair value resulting from the recovery on the financial markets from the second quarter of the year, which partly neutralized the negative change of €(3,235) million recognized in 2008.

# 27.2 Change in current and non-current financial assets other than derivatives

The variation in financial assets is as follows:

## 27.2.1 At December 31, 2009

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases | Changes in fair value | Change in scope | Other | 12.31.2009 |
|---|---|---|---|---|---|---|---|
| Available-for-sale financial assets | 23,112 | 10,957 | (11,918) | 1,349 | (1,806) | (889) | 20,805 |
| Held-to-maturity investments | 527 | 72 | (74) | - | - | (1) | 524 |
| Loans and financial receivables | 1,255 | 260 | (131) | - | 6,132 | 332 | 7,848 |

The decrease in available-for-sale financial assets includes the effect of elimination of shares in British Energy held at December 31, 2008 (€2,261 million) following consolidation of the company. It also reflects the redemption of preferred stock in CEG which were credited against the purchase price of CENG at a value of $1 billion, in accordance with the applicable agreements (see note 5.3).

Loans and receivables include €6,399 million representing reimbursements receivable from the NLF and the British Government for coverage of long-term nuclear obligations (see note 35.3).

## 27.2.2 At December 31, 2008

| *(in millions of Euros)* | 12.31.2007 | Increases | Decreases | Changes in fair value | Other | 12.31.2008 |
|---|---|---|---|---|---|---|
| Available-for-sale financial assets | 20,022 | 18,858 | (12,074) | (3,265) | (429) | 23,112 |
| Held-to-maturity investments | 527 | 74 | (69) | - | (5) | 527 |
| Loans and financial receivables | 1,864 | 1,448 | (1,267) | - | (790) | 1,255 |

# 27.3 Details of financial assets

## 27.3.1 Financial assets carried at fair value with changes in fair value included in income

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Derivatives - positive fair value | 4,662 | 4,753 |
| Fair value of derivatives held for trading (1) | 203 | 80 |
| Financial assets carried at fair value optionnaly with of changes in fair value included in income | 11 | - |
| **FINANCIAL ASSETS CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME** | **4,876** | **4,833** |
| *(1) Portion classified as liquid assets.* | *197* | *74* |

At December 31, 2009, 5% of derivatives were valued on the basis of prices listed on an active market, 91% were valued by reference to observable data, and 4% using internal models.

## 27.3.2 Available-for-sale financial assets

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **Equities*** | **Debt securities** | **Total** | Equities* | Debt securities | Total |
| Dedicated assets of EDF | 6,321 | 5,115 | **11,436** | 4,163 | 4,495 | 8,658 |
| Liquid assets | 2,400 | 2,138 | **4,538** | 4,957 | 1,694 | 6,651 |
| Strategic investment | 414 | - | **414** | 634 | - | 634 |
| Other | 4,179 | 238 | **4,417** | 5,166 | 2,003 | 7,169 |
| **AVAILABLE-FOR-SALE FINANCIAL ASSETS** | **13,314** | **7,491** | **20,805** | **14,920** | **8,192** | **23,112** |

* *Equities and investment funds.*

The "Strategic investment" item corresponds to the shares of Constellation Energy Group (see note 5.3).

At December 31, 2009, 34% of the portfolio is valued by reference to prices listed on an active market, and 64% by reference to observable data.

Changes in the fair value of available-for-sale financial assets (EDF's share) were recorded in equity over the period as follows:

**– In 2009**

| *(in millions of Euros)* | Gross changes in fair value recorded in equity (1) | Taxes related to gross changes in fair value recorded in equity | **Changes after taxes in fair value recorded in equity (1)** | Gross changes in fair value transferred to income (2) | Taxes related to changes in fair value transferred to income | **Changes after taxes in fair value transferred to income (2)** |
|---|---|---|---|---|---|---|
| Available-for-sale financial assets - equities | 1,006 | (323) | **683** | (145) | 43 | **(102)** |
| Available for sale financial assets - debts | 158 | (51) | **107** | 13 | (4) | **9** |
| Liquid assets | 93 | (32) | **61** | 109 | (37) | **72** |
| Other | (5) | 1 | **(4)** | (37) | 13 | **(24)** |
| **AVAILABLE-FOR-SALE FINANCIAL ASSETS** | **1,252** | **(405)** | **847** | **(60)** | **15** | **(45)** |

*(1) + / ( ): increase/decrease in equity (EDF's share).*

*(2) + / ( ): increase/decrease in net income.*

Gross changes in fair value included in equity in 2009 (EDF's share) principally concern:

- EDF: €1,134 million, including €1,106 million for dedicated assets;
- EnBW: €106 million.

These changes reflect the improvement observed on the financial markets from the second quarter of the year.

Impairment of €(48) million was recorded by EDF (note 27.3.2.1) and €(26) million by EnBW.

The impact on equity includes the current or deferred tax related to these changes in fair value.

**– In 2008**

| *(in millions of Euros)* | Gross changes in fair value recorded in equity [1] | Taxes related to gross changes in fair value recorded in equity | **Changes after taxes in fair value recorded in equity [1]** | Gross changes in fair value transferred to income [2] | Taxes related to changes in fair value transferred to income | **Changes after taxes in fair value transferred to income [2]** |
|---|---|---|---|---|---|---|
| Available for sale financial assets - equities | (3,235) | 919 | **(2,316)** | 50 | (21) | **29** |
| Available for sale financial assets - debts | 100 | (47) | **53** | 35 | (9) | **26** |
| Liquid assets | (24) | 8 | **(16)** | (23) | 8 | **(15)** |
| Other | (10) | 5 | **(5)** | 21 | (7) | **14** |
| **AVAILABLE-FOR-SALE FINANCIAL ASSETS** | **(3,169)** | **885** | **(2,284)** | **83** | **(29)** | **54** |

*(1) + / ( ): increase/decrease in equity (EDF's share).*

*(2) + / ( ): increase/decrease in net income.*

Gross changes in fair value included in equity in 2008 (EDF's share) principally concern:

- EDF: €(3,010) million, including €(1,786) million for dedicated assets, with the balance of €(1,224) million chiefly relating to two investment securities. No significant unrealized losses were identified on these two securities at December 31, 2008;
- EnBW: €(245) million.

## 27.3.2.1 EDF'S DEDICATED ASSET PORTFOLIO

### 27.3.2.1.1 SPECIFICITY OF THE PORTFOLIO

The dedicated asset portfolio is a highly specific means of covering long-term nuclear liabilities. The underlying principle, the way it is built up and the management and governance of the funds themselves are governed by the French law of June 28, 2006 and its implementing provisions on secure financing of nuclear expenses.

The law requires the full present cost of long-term nuclear obligations to be covered by 2011 and at all times after that date. This concerns decommissioning of existing plants and storage of all amounts of waste produced (spent fuel and fuel recovered from decommissioning, see note 35.5.2).

These assets are clearly identifiable and managed separately from the company's other financial assets and investments. They are also subject to specific monitoring and control by the Board of Directors and the administrative authorities.

### 27.3.2.1.2 PORTFOLIO CONTENTS AND MEASUREMENT

EDF's dedicated asset portfolio consists of diversified bond and equity instruments.

Certain dedicated assets take the form of Government bonds currently held and managed directly by EDF.

The rest comprise specialized collective investment funds on leading international markets, managed by independent French or foreign asset management companies selected on the basis of solicited proposals or through a call for bids. They cover various segments of the bond and equity markets, with EDF aiming to achieve the broadest diversification possible, in the form of open-end funds and small numbers of "reserved" funds established solely for the use of the Group (which does not participate in the fund management).

| *(in millions of Euros)* | **Fair value 12.31.2009** | Fair value 12.31.2008 |
|---|---|---|
| Securities | 234 | 157 |
| Equities-based unit trusts | 3,997 | 2,145 |
| **Equities** | **4,231** | **2,302** |
| Securities | 5,115 | 4,495 |
| Short-term unit trusts | 688 | 597 |
| **Bonds** | **5,803** | **5,092** |
| **Total Reserved investment funds** | **1,368** | **1,146** |
| **Monetary investment funds** | **34** | **118** |
| **DEDICATED ASSET PORTFOLIO** | **11,436** | **8,658** |

This portfolio is structured and managed on an index-based approach, following a strategic allocation defined by the Board of Directors and reported to the administrative authorities. The strategic allocation is designed to meet the overall objective of long-term coverage of obligations, and determines the structure and management of the portfolio as a whole. It also takes into consideration, international stock market cycles for which the statistical inversion generally observed between equity market cycles and bond market cycles – as well as between geographical

areas – has led the Group to define an overall composite benchmark indicator (50% international equities – 50% euro bonds), and continuation of investment until payments become due. As a result for accounting purposes, the portfolio is evaluated as a whole all funds combined, with the cash flows generated treated as a group of financial assets. This ensures consistency with the specificities of the dedicated asset portfolio, in particular the legal association with the liability and the distant timing of significant payments – the first important due date is not until 2021, and payments continue until 2117 for the plants currently in operation.

At the year-end, dedicated assets are presented in available-for-sale financial assets in the balance sheet, at their liquidation value. In view of the specific financial characteristics of the portfolio of dedicated assets, the Group has exercised judgment in determining whether indicators of impairment appropriate to the structure of the portfolio should be taken into consideration.

EDF thus takes a 5-year period as the criterion for recognition of prolonged decline compared to historical value. This period corresponds to the low end of the range of statistical estimates concerning stock markets.
Also, based on statistical observations of the asset/liability management model used for this portfolio, EDF considers impairment of dedicated assets to be significant when the value is 40% or more below the portfolio's historical value.

#### 27.3.2.1.3 VALUE OF THE PORTFOLIO OVER THE YEAR

The precedent table presents changes in the fair value of the dedicated asset portfolio.

The cash allocation to dedicated assets for 2009 amounted to €1,902 million compared to €1,785 million in 2008. In view of market conditions, these allocations were suspended from September 2008 and resumed in July 2009 once relative stability had returned to the financial markets. They will be adjusted as necessary to comply with the regulations requiring liabilities to be covered by the portfolio by June 2011. Withdrawals of €302 million were made to cover EDF's cash needs equivalent to amounts reversed from provisions for payments in execution of the relevant obligations.

Consequently, the fair value of the dedicated asset portfolio at December 31, 2009 amounts to €11,436 million, just above its cost price at that date. This value includes €1,106 million of changes in fair value recorded in equity (see note 27.3.2).

### 27.3.2.2 LIQUID ASSETS

Liquid assets are financial assets consisting of funds or interest rate instruments with initial maturity of over three months, that are readily convertible into cash regardless of their maturity, and are managed according to a liquidity-oriented policy.

EDF's monetary investment funds included in liquid assets amount to €2,400 million (€4,957 million at December 31, 2008).

### 27.3.2.3 OTHER SECURITIES

At December 31, 2009, other securities mainly include:
- at EnBW, €1,270 million in available-for-sale assets - debt instruments, including €1,109 million of reserved funds, and €1,093 million in available-for-sale assets - equities, including €591 million of reserved funds;
- at EDF, shares in AREVA (€299 million) and Veolia (€423 million).

The decrease in this item over 2009 is essentially attributable to consolidation of British Energy: the shares in British Energy acquired in September 2008 were recognized in the Group's balance sheet at December 31, 2008.

## 27.4 Fair value of financial assets recorded at amortized cost

| *(in millions of Euros)* | 12.31.2009 Fair value | 12.31.2009 Net book value | 12.31.2008 Fair value | 12.31.2008 Net book value |
|---|---|---|---|---|
| Held-to-maturity investments | 524 | 524 | 527 | 527 |
| Assets receivable from the NLF | 6,399 | 6,399 | - | - |
| Loans and financial receivables | 1,455 | 1,449 | 1,255 | 1,255 |
| **FINANCIAL INSTRUMENTS OTHER THAN DERIVATIVES** | **8,378** | **8,372** | **1,782** | **1,782** |

Since January 5, 2009, the date of first consolidation of British Energy, this item has included assets receivable from the NLF and the British Government. These assets finance British Energy's long-term nuclear obligations (see note 35.3.1).

# 27.5 Investment commitments

At December 31, 2009, commitments related to investments are as follows:

| (in millions of Euros) | 12.31.2009 Total | Maturity < 1 year | Maturity 1 - 5 years | Maturity > 5 years | 12.31.2008 Total |
|---|---|---|---|---|---|
| Investments commitments | 4,505 | 1,976 | 2,490 | 39 | 18,783 |
| Other financing commitments given | 233 | 170 | 47 | 16 | 338 |
| Other financing commitments received | 58 | 22 | 36 | - | 255 |

## 27.5.1 Investment commitments

The chief commitments executed in 2009 concern:

- completion of the purchase offer for British Energy by Lake Acquisitions Ltd., which was recorded as a share purchase commitment for £9,875 million (€10,367 million) (see note 5.1);
- contribution in January 2009 to Alpiq of the drawing rights to energy generated at the Emosson dam for CHF 722 million (€481 million) and cash subscription to a CHF 336 million (€224 million) capital increase by Alpiq (see note 6.1.3);
- acquisition of 49.99% of CEG's nuclear power generation assets for $4.5 billion. In view of the $1 billion liquidity contribution and various commitments related to the transaction, this caused an equivalent decrease in the Group's commitments;
- acquisition of 26% of EWE by EnBW for €937 million (EDF's share).

Other commitments mainly concern the following operations:

- Commitment granted to OEW by EDF International relating to EnBW under a shareholder agreement concluded on July 26, 2000:
  OEW, which jointly controls EnBW with EDF, has a put option on all or some of its Subjected Shares (25% of the capital of EnBW), exercisable at any time until December 31, 2011 at the price of €37.14 per share. This option is included in the EDF group's off balance sheet commitments at December 31, 2009 at the value of €2,322 million;

- Various options or agreements entered into by EDF International (€239 million including €236 million related to Taishan) and EnBW (€523 million) in respect of shares in various companies in the energy generation industry.
  Concerning Taishan, in application of the joint venture agreement of November 2009, EDF International, which holds 30% in the capital of the Chinese company Taishan Nuclear Power Joint Venture Company Limited, has made a commitment to the consortium of lenders to finance the project in proportion to its holding up to a limit of 120% of the budget initially approved by the Chinese authorities, and to make every reasonable effort to complete the project;

- Commitments made by Edev SA in relation to EDF Énergies Nouvelles (EDF EN): In connection with EDF EN's admission to the regulated market on November 28, 2006, a shareholder agreement and a further agreement concerning EDF EN were signed on July 17, 2006 between EDF and Edev (hereafter referred to as "the EDF group") and Mr Pâris Mouratoglou and the Luxembourg company SIIF – Société Internationale d'Investissements Financiers (hereafter referred to as "the Mouratoglou group"). An amendment to this agreement was also signed between the two Groups on November 10, 2006.
  The outstanding commitments made under these agreements by the EDF group and the Mouratoglou group applicable at December 31, 2009 are as follows:
  - Liquidity commitment
    The EDF group and the Mouratoglou group will refrain from any acquisition of shares that would reduce the publicly traded portion of the capital of EDF EN to below 95% of that portion. This commitment by the EDF group would expire should the Mouratoglou group come to own less than 10% of the capital of EDF EN;

  - Preferential right
    In the event that the Mouratoglou group plans to transfer some or all of its shares, the EDF group will benefit from a preferential right to purchase those shares. This right will be exercised differently depending on whether the beneficiary of the intended share transfer is one or more financial institutions (for placement with institutional investors or on the market), or other third parties.
    If the EDF group does not exercise its preferential right, the Mouratoglou group may proceed with the intended transfer.
    This preferential right will not apply in certain circumstances defined in the agreement;

  - Provisions concerning the Mouratoglou group's investment
    Should the Mouratoglou group's investment fall below 10% of the capital of EDF EN, Edev would grant the Mouratoglou group a put option for three months from the date at which the investment falls below 10%, covering all the Mouratoglou group's residual investment in EDF EN, at a per-share price equal to the average volume-weighted closing price of the EDF EN share over the 60 trading days preceding notification of exercise of the option; this price cannot be more than 10% higher than the share's last closing price before such notification.

If the Mouratoglou group does not exercise this put option, Edev will have a call option over all shares held by the Mouratoglou group for a three-month period starting upon the expiry of the exercise period for the above put option, at a per-share price identical to the price defined for the put option; this price cannot be more than 10% lower than the share's last closing price before notification.
These two options will automatically expire on December 31, 2015;

- Agreement with Veolia Environnement:
Veolia Environnement has granted EDF a call option on all its Dalkia shares in the event that a competitor of EDF takes control over Veolia Environnement. EDF has also granted Veolia Environnement a call option over all its Dalkia shares in the event that the status of EDF should change and a competitor of Veolia Environnement, individually or with other parties, should take control over EDF. If the parties fail to agree on the sale price of the shares, it is to be fixed by an independent expert;
- In connection with the formation of EDF Investissement Groupe, C3 (a wholly-owned EDF subsidiary) signed unilateral promises with NBI (Natixis Belgique Investissement, a subsidiary of the Natixis group) to buy and sell shares in investments held respectively by NBI and C3. NBI thus allows C3 to purchase NBI's investment at any time based on the company's net asset value until 2030, and to sell its total investment to NBI based on net asset value during the 5 years following formation of the company.

### 27.5.2 Other investment commitments

These commitments primarily concern investment guarantees provided by EDF Énergies Nouvelles (€61 million), Dalkia International (€19 million at December 31, 2009, €26 million at December 31, 2008), EnBW (€80 million at December 31, 2009, €77 million at December 31, 2008) and EDEV (€26 million at December 31, 2009, €27 million at December 31, 2008).
Through its subsidiaries EDF Énergies Nouvelles and Fenice, the EDF group also received various commitments amounting to a total of €59 million at December 31, 2009 (€255 million in 2008).

## Note 28 Inventories, including work-in-process

The carrying value of inventories, broken down by nature, is as follows:

| *(in millions of Euros)* | Nuclear fuel | Other fuel | Other raw materials | Work-in-process for production of goods and services | Other inventories | **Total inventories** |
|---|---|---|---|---|---|---|
| Gross value | 6,549 | 1,347 | 982 | 261 | 367 | **9,506** |
| Provisions | (14) | (5) | (180) | (4) | (13) | **(216)** |
| **Net value at 12.31.2008** | **6,535** | **1,342** | **802** | **257** | **354** | **9,290** |
| Gross value | 9,070 | 1,793 | 1,152 | 377 | 510 | **12,902** |
| Provisions | (12) | (4) | (204) | (3) | (17) | **(240)** |
| **NET VALUE AT 12.31.2009** | **9,058** | **1,789** | **948** | **374** | **493** | **12,662** |

The noticeable increase in nuclear fuel inventories essentially results from consolidation of British Energy and CENG (€2,279 million).

The long-term portion (more than one year) mainly concerns nuclear fuel inventories amounting to €4,765 million (€4,452 million at December 31, 2008).
The value of EDF Trading's inventories stated at market value is €622 million (€458 million at December 31, 2008).

# Note 29 Trade receivables

Details of net trade receivables are as follows:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Trade receivables, gross value - excluding EDF Trading | 17,918 | 17,433 |
| Trade receivables, gross value - EDF Trading | 2,401 | 2,183 |
| Provisions | (686) | (472) |
| **TRADE RECEIVABLES - NET VALUE** | **19,633** | **19,144** |

Most trade receivables mature within one year.

The credit risk on trade receivables is shown below:

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | Gross values | Provisions | Net values | Gross values | Provisions | Net nalues |
| **Trade receivables** | **20,319** | **(686)** | **19,633** | **19,616** | **(472)** | **19,144** |
| Overdue by up to 6 months | 1,940 | (148) | 1,792 | 1,735 | (162) | 1,573 |
| Overdue by 6-12 months | 318 | (86) | 232 | 236 | (60) | 176 |
| Overdue by more than 12 months | 428 | (321) | 107 | 311 | (165) | 146 |
| **Trade receivables due** | **2,686** | **(555)** | **2,131** | **2,282** | **(387)** | **1,895** |
| **Trade receivables not yet due** | **17,633** | **(131)** | **17,502** | **17,334** | **(85)** | **17,249** |

# Note 30 Other receivables

Details of other receivables are as follows:

| *(in millions of Euros)* | Current accounts receivable | Prepaid expenses | Other receivables | Total |
|---|---|---|---|---|
| Gross values at 12.31.2008 | 164 | 724 | 7,688 | 8,576 |
| Provisions at 12.31.2008 | (6) | - | (40) | (46) |
| **Net values at 12.31.2008** | **158** | **724** | **7,648** | **8,530** |
| Gross values at 12.31.2009 | 125 | 600 | 7,439 | 8,164 |
| Provisions at 12.31.2009 | (8) | - | (45) | (53) |
| **NET VALUES AT 12.31.2009** | **117** | **600** | **7,394** | **8,111** |

The majority of other receivables are due within one year.

"Other receivables" mainly comprise amounts due to the French State and public authorities.
In 2008, they also included €305 million of loans by Domofinance, a credit institution that provides loans to finance works and installations contributing to energy control. Following changes in shareholder agreements, Domofinance has been accounted for under the equity method since October 2009.

# Note 31 Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and at bank and investments in money market instruments. Cash and cash equivalents as stated in the cash flow statements include the following amounts recorded in the balance sheet:

| *(in millions of Euros)* | **12.31.2009** | 12.31.2008 |
|---|---|---|
| Cash | 3,569 | 1,525 |
| Cash equivalents | 3,207 | 4,135 |
| Financial current accounts | 206 | 209 |
| **CASH AND CASH EQUIVALENTS** | **6,982** | **5,869** |

# Note 32 Held-for-sale assets and liabilities

Held-for-sale assets and liabilities amount to €1,265 million and €411 million respectively at December 31, 2009.
They mainly result from the planned disposals of assets (€772 million) and liabilities (€323 million) of GESO, a company owned by EnBW, and the Eggborough power plant belonging to British Energy, in line with the commitment by EDF (see note 5.1.5).

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Non current assets | 1,265 | 2 |
| Current assets | - | - |
| **HELD-FOR-SALE ASSETS** | **1,265** | **2** |
| Non current liabilities | 411 | - |
| Current liabilities | - | - |
| **HELD-FOR-SALE LIABILITIES** | **411** | |

# Note 33 Equity



## 33.1 Share capital

Settlement on December 17, 2009 of the interim dividend decided for 2009, payable in the form of new shares at the choice of the beneficiary, led to issuance of 26,695,572 new shares with nominal value of €0.50 each plus an issue premium of €34.63. This resulted in a €13 million increase in the share capital plus a share issue premium of €925 million. Issuance expenses were charged to this premium.

At December 31, 2009, the share capital amounted to €924,433,331, comprising 1,848,866,662 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.5% by the French State (84.66% at December 31, 2008), 13.1% by the public (institutional and private investors) and 2.4% by current and retired Group employees.

## 33.2 Treasury shares

A share repurchase program authorized by the General Shareholders' Meeting of June 9, 2006 was implemented by the Board of Directors, within the limits of 10% of the total number of shares making up the Company's capital. The initial duration of the program is 18 months, renewable by tacit agreement for 12 months.

Under the share repurchase program, for which a liquidity contract exists as required by the market regulator AMF, 2,208,559 shares were acquired during 2009 for a total of €82 million, and 2,480,559 shares were sold for a total of €94 million.

At December 31, 2009, treasury shares deducted from consolidated equity represent 244,412 shares with total value of €9 million.

## 33.3 Dividends

The General Shareholders' Meeting of May 20, 2009 decided to distribute a dividend of €1.28 per share in respect of 2008. The balance of €1,164 million was paid out on June 3, 2009, after the interim dividend of €0.64 per share (total €1,164 million) distributed on December 17, 2008 in accordance with the decision of the Board of Directors of November 20, 2008.

On November 5, 2009 the Board of Directors also decided to pay an interim dividend of €0.55 per share in respect of 2009, in the form of cash or new shares with an issue price of €35.13. The total value of dividends paid was €1,002 million (see note 33.1).

## 33.4 Basic earnings per share and diluted earnings per share

The diluted earnings per share is calculated by dividing the Group's share of net income, corrected for dilutive instruments, by the weighted average number of potential shares outstanding over the period after elimination of treasury shares.

At December 31, 2009, there are no dilutive instruments in the EDF group.

The following table shows the reconciliation of the basic and diluted earnings used to calculate earnings per share, and the variation in the weighted average number of shares used in calculating basic and diluted earnings per share:

| | 12.31.2009 | 12.31.2008 (1) |
|---|---|---|
| Net income attributable to ordinary shares | 3,905 | 3,484 |
| Dilutive effect | - | - |
| **Net income used to calculate diluted earnings per share** *(in millions of Euros)* | **3,905** | **3,484** |
| **Average weighted number of ordinary shares outstanding at end of period (2)** | **1,822,533,280** | **1,823,197,300** |
| EDF's dilutive effect | - | - |
| **Average weighted number of diluted shares outstanding at end of period** | **1,822,533,280** | **1,823,197,300** |
| **Earnings per share in Euros:** | | |
| **NET EARNINGS PER SHARE** *(in Euros)* | **2.14** | **1.91** |
| **DILUTED EARNINGS PER SHARE** *(in Euros)* | **2.14** | **1.91** |

*(1) 2008 figures have been adjusted for the impact of application of revised IAS 23, "Borrowing costs".*

*(2) In application of IAS 33, the average weighted number of shares outstanding used to calculate earnings per share for 2008 has been adjusted following the December 2009 dividend distribution in the form of shares.*

## 33.5 Capital management

Article 24 of the law of August 9, 2004 requires the State to hold more than 70% of the capital of EDF at all times.

Equity has increased since the IPO of November 2005, largely due to the realized profits net of dividends paid out, and after inclusion of changes in the fair value of financial instruments taken to equity. It amounts to €32,725 million at December 31, 2009 compared to its year-end 2008 level of €24,998 million, which reflected the combined effects of the financial crisis, the decline in the pound sterling and the lower commodity prices of late 2008.

As a result of the increase in net indebtedness due to the high investment program and external growth operations in 2009, the solvency ratio consisting of the net financial debt to capital employed, calculated by reference to the net indebtedness (see note 39.3) and equity including minority interests, has increased from 50% at December 31, 2008 to 56% at December 31, 2009.

# Note 34 Provisions

The breakdown between current and non-current provisions is as follows:

| | | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | Notes | Current | Non-current | Total | Current | Non-current | Total |
| Provisions for back-end nuclear cycle | 35.1.1 | 1,042 | 17,531 | 18,573 | 852 | 14,686 | 15,538 |
| Provisions for decommissioning and last cores | 35.1.2 | 350 | 20,003 | 20,353 | 256 | 13,886 | 14,142 |
| Provisions for employee benefits | 36.1 | 837 | 13,412 | 14,249 | 829 | 12,890 | 13,719 |
| Other provisions | 36.7 | 3,629 | 1,188 | 4,817 | 2,785 | 1,953 | 4,738 |
| **PROVISIONS** | | **5,858** | **52,134** | **57,992** | **4,722** | **43,415** | **48,137** |

# Note 35 Provisions for the back-end nuclear cycle and decommissioning



Provisions are estimated under the principles presented in notes 3.2.1 and 3.2.2.

Obligations can vary noticeably depending on each country's legislation and regulations, and the technologies and industrial practices used in each company.

## 35.1 Movement in provisions

### 35.1.1 Provisions for back-end nuclear cycle expenses

The movement in provisions for back-end nuclear cycle expenses breaks down as follows:

#### 35.1.1.1 AT DECEMBER 31, 2009

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases | | Change in scope | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | | |
| Provisions for spent nuclear fuel management | 8,806 | 851 | (718) | (23) | 2,207 | 24 | 11,147 |
| Provisions for long-term radioactive waste management | 6,732 | 408 | (141) | (33) | 404 | 56 | 7,426 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **15,538** | **1,259** | **(859)** | **(56)** | **2,611** | **80** | **18,573** |

### 35.1.1.2 AT DECEMBER 31, 2008

| (in millions of Euros) | 12.31.2007 | Increases | Decreases | | Other changes | 12.31.2008 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for spent nuclear fuel management | 11,011 | 961 | (2,974) | (18) | (174) | 8,806 |
| Provisions for long-term radioactive waste management | 6,444 | 375 | (132) | (38) | 83 | 6,732 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **17,455** | **1,336** | **(3,106)** | **(56)** | **(91)** | **15,538** |

### 35.1.1.3 BREAKDOWN OF PROVISIONS BY COMPANY

| (in millions of Euros) | EDF | British Energy | EnBW | Other | Total |
|---|---|---|---|---|---|
| Note | 35.2 | 35.3 | 35.4 | 35.6 | |
| **Provisions at 12.31.2008** | **14,711** | **-** | **827** | **-** | **15,538** |
| Increases | 1,159 | - | 100 | - | 1,259 |
| Decreases | (866) | - | (49) | - | (915) |
| Change in scope | - | 2,609 | - | 2 | 2,611 |
| Other changes | 26 | 51 | 1 | 2 | 80 |
| **PROVISIONS AT 12.31.2009** | **15,030** | **2,660** | **879** | **4** | **18,573** |

## 35.1.2 Provisions for decommissioning and last cores

The change in decommissioning and last core provisions over 2009 and 2008 breaks down as follows:

### 35.1.2.1 AT DECEMBER 31, 2009

| (in millions of Euros) | 12.31.2008 | Increases | Decreases | | Change in scope | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | | |
| Provisions for decommisioning | 12,445 | 663 | (269) | (5) | 4,087 | 399 | 17,320 |
| Provisions for last cores | 1,697 | 206 | - | - | 1,075 | 55 | 3,033 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **14,142** | **869** | **(269)** | **(5)** | **5,162** | **454** | **20,353** |

### 35.1.2.2 AT DECEMBER 31, 2008

| *(in millions of Euros)* | 12.31.2007 | Increases | Decreases | | Other changes | 12.31.2008 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for decommisioning | 11,933 | 745 | (325) | (6) | 98 | 12,445 |
| Provisions for last cores | 1,721 | 85 | - | (109) | - | 1,697 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **13,654** | **830** | **(325)** | **(115)** | **98** | **14,142** |

### 35.1.2.3 BREAKDOWN OF PROVISIONS BY COMPANY

| *(in millions of Euros)* | EDF | British Energy | EnBW | CENG | Other | Total |
|---|---|---|---|---|---|---|
| Note | 35.2 | 35.3 | 35.4 | 35.5 | 35.6 | |
| **Provisions at 12.31.2008** | **12,469** | **-** | **1,365** | **-** | **308** | **14,142** |
| Increases | 704 | 66 | 76 | 4 | 19 | 869 |
| Decreases | (221) | (27) | (23) | - | (3) | (274) |
| Change in scope | - | 4,633 | - | 426 | 103 | 5,162 |
| Other changes | 6 | 416 | 35 | 12 | (15) | 454 |
| **PROVISIONS AT 12.31.2009** | **12,958** | **5,088** | **1,453** | **442** | **412** | **20,353** |

## 35.2 EDF's provisions

In France, EDF's provisions are calculated in accordance with the instructions of the law of June 28, 2006 and its implementing provisions.

In compliance with the regulation on secure financing of nuclear expenses:

- EDF books provisions to cover all obligations related to the nuclear facilities it operates;
- EDF is building up a portfolio of dedicated assets to cover long-term obligations (see note 35.2.3.3).

The relevant expenses are estimated based on the economic conditions of the year-end. They are then discounted using the rates specified in note 35.2.3 and spread over a forecast disbursement schedule.

## 35.2.1 EDF's provisions for back-end nuclear cycle expenses in France

| (in millions of Euros) | 12.31.2008 | Increases | Decreases | | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for burnt nuclear fuel management | 8,553 | 837 | (714) | (11) | 21 | 8,686 |
| Provisions for long-term radioactive waste management | 6,158 | 322 | (119) | (22) | 5 | 6,344 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **14,711** | **1,159** | **(833)** | **(33)** | **26** | **15,030** |

Expenses are estimated based on the economic conditions of the year-end, discounted to present value (see note 35.2.3.1) as follows:

| (in millions of Euros) | 12.31.2009 | | 12.31.2008 | |
|---|---|---|---|---|
| | **Costs based on economic conditions at end of period** | **Amounts in provisions at present value** | Costs based on economic conditions at end of period | Amounts in provisions at present value |
| Spent fuel management | 13,969 | 8,686 | 13,675 | 8,553 |
| Long term radioactive waste management | 22,321 | 6,344 | 21,464 | 6,158 |
| **BACK-END NUCLEAR CYCLE EXPENSES** | **36,290** | **15,030** | **35,139** | **14,711** |

### 35.2.1.1 PROVISIONS FOR SPENT FUEL MANAGEMENT

These provisions cover services in connection with the following:
- removal of spent fuel from EDF's generation centers, as well as reception, interim storage and processing of spent fuel, including conditioning and storage of the resulting waste;
- processing expenses exclusively concerning spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated.

Measurement of these expenses follows the principles set forth in the EDF-AREVA framework agreement governing spent fuel management contracts (processing and recycling) for the post-2007 period. This agreement was signed on December 19, 2008 in continuation of past contractual clauses. Negotiations between EDF and AREVA continued until February 5, 2010, when agreement was reached on the principles for application of the framework agreement. These principles should be implemented in the operating contract for 2008-2012 shortly.
For oxidation and storage of uranium obtained from processed fuel that is not immediately recycled, measurement of expenses is based on EDF's best estimates, taking into account the ongoing negotiations with AREVA and short-term recycling forecasts for these materials.

Expenses are calculated based on forecast physical flows at the reporting date.

For fuel in reactors but not yet irradiated, provisions are booked against an increase in the value of the fuels included in inventories.

EDF's contribution towards decommissioning costs for La Hague reprocessing plant, and its share of the cost of recovering and conditioning old waste, are defined in an agreement signed with AREVA on July 6, 2009 setting the exact amounts and timing of payments and releasing EDF from any further obligation. The last installment is due to be paid by July 1, 2011.The first two installments have been paid and the outstanding payments, amounting to € 1.478 billion including taxes, are recorded in operating liabilities.

### 35.2.1.2 PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT

This includes future expenses for:
- removal and storage of radioactive waste resulting from decommissioning of regulated nuclear installations operated by EDF;
- removal and storage of radioactive waste resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled on an industrial scale in existing installations: plutonium or uranium fuel derived from enriched processing, fuel from Creys Malville and Brennilis;
- EDF's share of the costs of studies, coverage, shutdown and surveillance of storage centers:
  - existing centers, for very low-level waste, and low and medium-level waste,
  - new centers to be opened, for long-life low-level waste and long-life medium and high-level waste.

The volumes of waste concerned by provisions include packages of existing waste and all waste to be conditioned, resulting from plant decommissioning or spent fuel processing at La Hague (based on all fuel in reactors at December 31, burnt or otherwise). These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by the French agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*).

For waste resulting from decommissioning of plants in operation, the accounting treatment is identical to the treatment of decommissioning expenses: an asset corresponding to the provision is recognized under the accounting policies described in note 3.11.1.

For future waste that will result from fuel currently in reactors but not yet irradiated, provisions are booked against an increase in the cost of the fuel included in inventories.

The provision for long-life medium and high-level waste is the largest component of the provisions for long-term radioactive waste management. The French law of June 28, 2006 on the sustainable management of radioactive materials and waste has confirmed EDF's assumption of geological storage. Provisions are based on that assumption.

Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by the task force set up by the French department for Energy and Raw Materials (*Direction Générale de l'Énergie et des Matières Premières* – DGEMP, which has since become the French department for Energy and Climate – *Direction Générale de l'Énergie et du Climat* or DGEC) comprising members representing the relevant Government departments (DGEMP, the State investment agency APE and the Budget Department), ANDRA and the producers of waste (EDF, AREVA, CEA). The approach applied by EDF to the working party's conclusions is reasonable and coherent with information available internationally.

Regarding the provision for long-life low-level waste, ANDRA began to seek a storage site in 2008. Although the two sites selected for geological investigation have withdrawn, the DGEC and ANDRA do not at this stage consider that adjustment is required to the schedule for development of the storage site for long-life low-level waste due to open in 2019.

## 35.2.2 EDF's provisions for decommissioning and last cores in France

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases<br>Utilizations | Other changes | 12.31.2009 |
|---|---|---|---|---|---|
| Decommissioning provisions for fossil-fired power plants | 434 | 30 | (45) | 6 | 425 |
| Decommissioning provisions for nuclear power plants | 10,360 | 524 | (176) | - | 10,708 |
| Provisions for last cores | 1,675 | 150 | - | - | 1,825 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **12,469** | **704** | **(221)** | **6** | **12,958** |

Expenses are estimated based on the economic conditions of the year-end, discounted to present value (see note 35.2.3) as follows:

| | 12.31.2009 | | 12.31.2008 | |
|---|---|---|---|---|
| *(in millions of Euros)* | **Costs based on economic conditions at end of period** | **Amounts in provisions at present value** | Costs based on economic conditions at end of period | Amounts in provisions at present value |
| Decommissioning provisions for fossil-fired power plants | 594 | 425 | 609 | 434 |
| Decommissioning provisions for nuclear power plants | 20,696 | 10,708 | 20,452 | 10,360 |
| Provisions for last cores | 3,732 | 1,825 | 3,566 | 1,675 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **25,022** | **12,958** | **24,627** | **12,469** |

#### 35.2.2.1 DECOMMISSIONING PROVISIONS FOR EDF'S FOSSIL-FIRED POWER PLANTS IN FRANCE

The expenses related to decommissioning of fossil-fired power plants are determined according to regularly updated studies based on estimated future costs, measured by reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

The provision recorded at December 31, 2009 reflects the most recent known contractor quotes and commissioning of new generation assets.

For plants still in operation, an asset is recorded against the provision under the principles presented in note 3.11.1.

#### 35.2.2.2 DECOMMISSIONING PROVISIONS FOR EDF'S NUCLEAR POWER PLANTS IN FRANCE

These provisions concern the decommissioning of pressurized water reactor (PWR) nuclear power plants currently in operation and nuclear power plants that have been permanently shut down.
They are estimated on the assumption that once decommissioning is complete, the sites will be returned to their original state and the land reused.

For plants still in operation:
- an asset corresponding to the provision is recognized under the accounting policies described in note 3.11.1;
- an asset is also recorded in the form of accrued revenues, in order to recognize the share of decommissioning costs to be borne by foreign partners, in proportion to their investment in the PWR plants concerned.

##### *(A)* For nuclear power plants currently in operation (PWR plants with 900 MW, 1,300 MW and N4 reactors)

Provisions are estimated based on a 1991 study by the French Ministry of Trade and Industry, which set an estimated benchmark cost in €/MW, confirming the assumptions defined in 1979 by the PEON commission. This estimate was confirmed by further studies carried out in 1999 focusing on a specific site, and a further valuation in 2009.

In compliance with commitments, in 2009 EDF revalued decommissioning costs for PWR plants in operation through a procedure comprising the following stages:
- measurement of the decommissioning cost for a PWR plant with four 900 MW units, taking into consideration the most recent developments in regulations, past experience in decommissioning of shut-down plants and recommendations issued by the French Nuclear Safety Authority;
- a review of the scheduling for decommissioning operations over time;
- determination of the rules for extrapolation of costs for the entire fleet of PWR plants in operation.

International intercomparison supported the results of this study.

This revaluation resulted in a figure for decommissioning costs that confirms the amount of the provision booked to date, and validates the benchmark costs used, expressed as €/MW.

The figure includes measurement of the provisions for the three regulated nuclear installations (*Installations nucléaires de base*) attached to the PWR fleet currently in operation, in keeping with commitments made.

##### *(B)* For permanently shut-down nuclear power plants (UNGG power plants, Creys-Malville, Brennilis and Chooz A)

The provision is based on contractor quotes (costs and schedules) updated in 2008, which take into account changes in technical and financial assumptions, experience of decommissioning operations currently in process and an intercomparison study.

The expected disbursements are inflated on the basis of the payment schedules established internally, then discounted to present value.

Under the agreement signed by EDF and the CEA in December 2008 for decommissioning of the Brennilis and Phénix plants and the treatment of spent fuel from the same plants, EDF has sole responsibility for decommissioning of Brennilis, and is freed from all further obligations for decommissioning of Phénix. Each party remains responsible for long-term waste management in proportion to its initial investment. The full and final payments were made on March 10, 2009.

#### 35.2.2.3 PROVISION FOR LAST CORES

This provision covers expenses related to the future loss on unused fuel following the final reactor shutdown. It comprises two types of expenses:
- write-down of the inventory of fuel in the reactor that will not be totally burnt when the reactor is shut down, valued at the last known average price;
- the cost of fuel reprocessing and the corresponding waste disposal and storage costs for fuel not yet spent at the time the plant shuts down. These costs are valued in a similar way to provisions for spent fuel management and long-term radioactive waste management.

Since this provision relates to an obligation that existed at the commissioning date of the nuclear unit containing the core, all costs are fully covered by provision and an asset associated with the provision is recognized.

### 35.2.3 Secure financing of long-term obligations for EDF's nuclear installations

#### 35.2.3.1 DISCOUNT RATE

EDF applies a discount rate of 5% in calculating its provisions, together with assumed inflation of 2%, resulting in an effective rate of close to 3%.

### – Calculation of the discount rate

The discount rate is determined based on long series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.
The assumption of the nominal rate is currently appropriate for the duration of nuclear commitments, especially in view of the French 2055 treasury bond. As the average return on 50-year French treasury bonds is not currently available over a sufficient duration, the benchmark is the sliding average over 10 years of the return on French treasury bonds over longer time horizons, plus the spread of corporate bonds rated A to AA, which include EDF.

The assumed inflation rate used is coherent with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked bonds.

### – Revision of the discount rate

The methodology used to determine the discount rate gives priority to long-term trends in rates, in keeping with the long-term horizon for disbursements. The discount rate is therefore revised in response to structural developments in the economy leading to medium- and long-term changes.

The discount rate applied complies with the two limits set by the decree of February 23, 2007 and the decision of March 21, 2007. It must remain below:

- a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months of the constant 30-year rate (*TEC 30 ans*), observed on the last date of the period concerned, plus one point",
- and the expected rate of return on assets covering the liability.

## 35.2.3.2 SENSITIVITY FACTORS IN PROVISIONS FOR THE BACK-END NUCLEAR CYCLE AND PROVISIONS FOR DECOMMISSIONING AND LAST CORES

This sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under economic conditions for December of the year concerned with the discounted value of the amount.

This approach can be complemented by estimating the impact of a change in the discount rate on the discounted value.

In application of article 11 of the decree of February 23, 2007, the following table reports these details for the main components of provisions for the back-end nuclear cycle, decommissioning of nuclear plants and last cores:

| | Amounts in provisions at present value | | Sensitivity to discount rate | | | |
|---|---|---|---|---|---|---|
| | | | 2009 | | 2008 | |
| *(in millions of Euros)* | 2009 | 2008 | +0.25% | -0.25% | +0.25% | -0.25% |
| **Back-end nuclear cycle** | | | | | | |
| Spent fuel management | 8,686 | 8,553 | (192) | 205 | (189) | 201 |
| Long term radiactive waste management | 6,344 | 6,158 | (391) | 445 | (378) | 430 |
| **Decommissioning and last cores** | | | | | | |
| Decommissioning provisions for nuclear power plants | 10,708 | 10,360 | (542) | 575 | (539) | 574 |
| Provisions for last cores | 1,825 | 1,675 | (81) | 87 | (79) | 85 |
| **TOTAL** | **27,563** | **26,746** | **(1,206)** | **1,312** | **(1,185)** | **1,290** |

## 35.2.3.3 DEDICATED ASSETS

The law of June 28, 2006 on sustainable management of radioactive materials and waste and the decree of February 23, 2007 require nuclear power operators to apply a plan for constitution of dedicated assets. These regulations require the value of the dedicated asset portfolio (see note 27.3.2.1) to be at least equal to the value of provisions within 5 years, *i.e.* by June 2011.

# 35.3 British Energy's nuclear provisions

## 35.3.1 Restructuring agreements – Financing long-term obligations

Amendments signed with the Nuclear Liabilities Fund (NLF - an independent trust set up by the UK Government as part of the restructuring of British Energy) following the EDF group's acquisition of British Energy have a limited impact on the contractual financing commitments made to British Energy by the UK Secretary of State and the NLF under the "Restructuring Agreements". These agreements were entered into by British Energy on January 14, 2005 as part of the restructuring led by the UK Government from 2005 in order to stabilize British Energy's financial position. Under the terms of the Restructuring Agreements:

- the NLF agreed to fund, to the extent of its assets: (i) qualifying contingent and/or latent nuclear liabilities (including liabilities for management of spent fuel from the Sizewell B power station); and (ii) qualifying decommissioning costs for British Energy's existing nuclear power stations;
- the Secretary of State agreed to fund: (i) qualifying contingent and/or latent nuclear liabilities (including liabilities for the management of spent fuel from the Sizewell B power station) and qualifying decommissioning costs related to British Energy's existing nuclear power stations, to the extent that they exceed the assets of the NLF; and (ii) subject to a cap of £2,185 million (in December 2002 monetary values, adjusted accordingly), qualifying known existing liabilities for British Energy's spent fuel (including liabilities for management of spent fuel from plants other than Sizewell B loaded in reactors prior to January 15, 2005);
- the British Energy group is responsible for funding certain excluded or disqualified liabilities (mainly liabilities incurred in connection with unsafe or careless operation of the power plants). The obligations of British Energy to the NLF and the Secretary of State are guaranteed by the assets of the principal members of British Energy group.

British Energy has also undertaken commitments to pay:

- annual decommissioning contributions for a period limited to the useful lives of the plants that had ceased operations at the date of the "restructuring agreements"; the corresponding provision amounts to €205 million at December 31, 2009;
- £150,000 (indexed to inflation) per tonne of uranium loaded in the Sizewell B reactor after the date of the "restructuring agreements".

Furthermore, British Energy has entered into a separate contract with the Nuclear Decommissioning Authority (NDA) for management of radioactive waste resulting from operation of power plants other than Sizewell B after January 15, 2005 and bears no responsibility for this waste once it is transferred to the processing site at Sellafeld.

The specific financing terms for long-term nuclear obligations are reflected as follows in the EDF group's financial statements:

- the obligations are reported in liabilities in the form of provisions amounting to €7,748 million at December 31, 2009;
- in the assets, EDF reports receivables corresponding to the amounts payable under the restructuring agreements by the NLF, for non-contracted obligations or decommissioning obligations, and by the British Government for contracted obligations (or historic liabilities).

These receivables are discounted at the same real rate as the obligations they are intended to finance, and amount to €6,399 million at December 31, 2009 (see note 27.4).

## 35.3.2 British Energy's provisions for the back-end nuclear cycle

| *(in millions of Euros)* | Change in scope | Other changes | 12.31.2009 |
|---|---|---|---|
| Provisions for spent nuclear fuel management | 2,207 | 2 | 2,209 |
| Provisions for long-term radioactive waste management | 402 | 49 | 451 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **2,609** | **51** | **2,660** |

Spent fuel from the Sizewell B PWR plant is stored onsite. Spent fuel from other plants is reprocessed at Sellafeld or stored.

The British Energy Group's provisions for the back-end nuclear cycle concern obligations for reprocessing and storage of spent fuel and long-term storage of radioactive waste, required by the existing regulations in the UK approved by the Nuclear Decommissioning Authority (NDA).

Their amount is based on contractual agreements or if this is not possible, on the most recent technical estimates.

Costs making up back-end expenses (transportation, temporary storage, reprocessing and long-term storage) are recorded in inventories and transferred to expenses in proportion to the quantities of spent fuel concerned.

| *(in millions of Euros)* | Back-end nuclear cycle Contractualized spending | Back-end nuclear cycle Non contractualized spending | 12.31.2009 Total |
|---|---|---|---|
| Not updated amounts (current prices) | 2,704 | 3,120 | 5,824 |
| Updated amounts (real rate 3%) | 2,209 | 599 | 2,808 |
| Amounts in provisions | 2,209 | 451 | 2,660 |

## 35.3.3 British Energy's provisions for decommissioning of nuclear plants and last cores

| *(in millions of Euros)* | Increases | Decreases Utilizations | Change in scope | Other changes | 12.31.2009 |
|---|---|---|---|---|---|
| Provisions for decommisioning | 11 | (27) | 3,594 | 360 | 3,938 |
| Provisions for last cores | 55 | - | 1,039 | 56 | 1,150 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **66** | **(27)** | **4,633** | **416** | **5,088** |

Provisions for decommissioning of nuclear plants result from management's best estimates. They cover the full cost of decommissioning and are measured on the basis of existing techniques and methods that are most likely to be used for application of current regulations. The last estimates date from 2006 and assume that plants will be decommissioned and the land will ultimately be reused.

| Decommissioning *(in millions of Euros)* | 12.31.2009 |
|---|---|
| Not updated amounts (current prices) | 11,746 |
| Updated amounts (real rate 3%) | 3,733 |
| Amounts in provisions | 3,733 |

The following table only concerns decommissioning obligations, excluding the discounted value of decommissioning contributions payable to the NLF (€205 million) (see note 35.3.1).

# 35.4 EnBW's provisions

EnBW's provisions are based on the obligations prescribed by law and the regulations, or resulting from operating licenses.

The discount rate applied is 5.5%.

## 35.4.1 EnBW's provisions for the back-end nuclear cycle

| (in millions of Euros) | 12.31.2008 | Increases | Decreases | | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for spent nuclear fuel management | 253 | 14 | (5) | (12) | - | 250 |
| Provisions for long-term radioactive waste management | 574 | 86 | (21) | (11) | 1 | 629 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **827** | **100** | **(26)** | **(23)** | **1** | **879** |

These provisions amount to €879 million at December 31, 2009 (€827 million at December 31, 2008).

Following the ban introduced on July 1, 2005 on transportation of spent fuel to reprocessing plants, spent fuel is no longer reprocessed and nuclear operators are obliged to store it in temporary storage centers built at the plant sites (the atomic agreement of 2000 and the law of 2002).

Waste corresponding to spent fuel sent for reprocessing before July 1, 2005 is brought back to Germany for storage. The return of this waste should continue over the next few years.

Payments are also made to the federal radioprotection department in application of decrees on the prerequisites for creation and commissioning of the Gorleben and Konrad permanent storage centers.

Provisions are estimated on the following bases:

- on contracts, for spent fuel management: this concerns the cost of decentralized temporary storage near the nuclear plants, centralized temporary storage at the Gorleben and Ahaus sites, the costs of transportation and acquisition costs for containers, and residual fuel reprocessing costs.
- on estimations, for long-term waste management: this concerns the cost of spent fuel conditioning in preparation for final storage, costs of removal to the final storage site (transportation and acquisition of containers) and the costs of final storage itself.

## 35.4.2 Decommissioning provisions for the EnBW Group's nuclear plants

| (in millions of Euros) | 12.31.2008 | Increases | Decreases | | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for decommisioning | 1,343 | 75 | (20) | (3) | 36 | 1,431 |
| Provisions for last cores | 22 | 1 | - | - | (1) | 22 |
| **PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **1,365** | **76** | **(20)** | **(3)** | **35** | **1,453** |

Decommissioning provisions are estimated on the assumption that decommissioning will take place as soon as possible with no waiting period, and amounts are based on independent expert assessments and cost valuations.

Provisions cover post-operating and dismantling expenses, the costs of waste, decommissioning, and personnel expenses specific to the company that can be assigned to plant shutdown operations.

They are established as soon as the plants are commissioned, and a corresponding asset is recognized in accordance with the accounting principles described in note 3.1.2.

# 35.5 CENG's provisions

In the US, obligations for spent fuel management, waste management and plant decommissioning are chiefly governed by the NRC (Nuclear Regulatory Commission), and waste transport obligations are governed by the Department of Transport.

| *(in millions of Euros)* | Increases | Change in scope | Other changes | 12.31.2009 |
|---|---|---|---|---|
| Provisions for decommissioning and last cores | 4 | 426 | 12 | 442 |

## 35.5.1 ENG's provisions for the back-end nuclear cycle

Spent fuel is not reprocessed. It is put in temporary storage for future transfer to the US Department of Energy (DOE), which will be responsible for final storage. CENG thus pays a quarterly contribution based on the quantity of electricity produced. No provision has been established for this cost.

## 35.5.2 Decommissioning provisions for CENG's nuclear plants

CENG is under an obligation to decommission its three nuclear power plants when they cease operations, in compliance with NRC regulations.

Estimates of decommissioning costs are calculated for each individual site based on technical studies that are regularly updated.

Decommissioning provisions mainly cover internal and external personnel expenses, the cost of materials and equipment, transportation and underground storage, energy costs, real property taxes, contributions paid to the NRC for the decontamination certificate procedures and land rehabilitation expenses in compliance with recommendations.

## 35.5.3 Assets covering nuclear obligations

The NRC requires a trust fund to be set up plant by plant to finance decommissioning. These trust funds are invested in debt instruments and equities, and are reserved for the relevant nuclear power plant. The company's Investment Committee decides on the general investment strategy, including the allocation between asset categories. Investments comply with a conservative approach. Funds cannot be invested directly in companies that own nuclear power plants.
The NRC sets minimum levels for these trust funds, and inspections are carried out every two years. If a shortfall is noted, the NRC may require additional financial guarantees in the form of cash, letters of credit or guarantees from the parent company.

These covering assets are recorded as held-for-sale assets at fair value (stock market value).

## 35.6 Other subsidiaries

Obligations associated with the back-end of the nuclear cycle concern SPE's share of nuclear power plants.

Decommissioning obligations primarily concern fossil-fired plants in Europe, nuclear plants in Belgium and other industrial facilities.

# Note 36 Provisions for employee benefits



## 36.1 Changes in provisions

The changes in provisions for employee benefits were as follows in the last two years:

### 36.1.1 At December 31, 2009

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases | | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|
| | | | Utilization | Reversals | | |
| Provisions for post-employment benefits | 12,703 | 2,211 | (1,933) | (6) | 143 | 13,118 |
| Provisions for other long-term benefits | 1,016 | 222 | (122) | (1) | 16 | 1,131 |
| **PROVISIONS FOR EMPLOYEE BENEFITS** | **13,719** | **2,433** | **(2,055)** | **(7)** | **159** | **14,249** |

| *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other International | Other Activities | Total |
|---|---|---|---|---|---|---|---|
| **Provisions at 12.31.2008** | **11,420** | **141** | **1,918** | **59** | **41** | **140** | **13,719** |
| Amounts used at end of period | (937) | (347) | (104) | (9) | (9) | (18) | **(1,424)** |
| Changes in the scope of consolidation | - | 13 | - | 1 | 176 | - | **190** |
| Net additions | 1,292 | 342 | 127 | 6 | 16 | 12 | **1,795** |
| Translation adjustment | - | 11 | - | - | 4 | 1 | **16** |
| Other | (2) | (41) | (2) | (3) | 2 | (1) | **(47)** |
| **PROVISIONS AT 12.31.2009** | **11,773** | **119** | **1,939** | **54** | **230** | **134** | **14,249** |

The change in provisions since December 31, 2008 mainly results from the consolidation of British Energy, CENG and SPE.

### 36.1.2 At December 31, 2008

| *(in millions of Euros)* | 12.31.2007 | Increases | Decreases | | Other changes | 12.31.2008 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for post-employment benefits | 12,675 | 2,117 | (1,760) | (317) | (12) | 12,703 |
| Provisions for other long-term benefits | 1,088 | 176 | (159) | - | (89) | 1,016 |
| **PROVISIONS FOR EMPLOYEE BENEFITS** | **13,763** | **2,293** | **(1,919)** | **(317)** | **(101)** | **13,719** |

| *(in millions of Euros)* | France | United Kingdom | Germany | Italy | Other International | Other Activities | Total |
|---|---|---|---|---|---|---|---|
| **Provisions at 12.31.2007** | **11,370** | **268** | **1,892** | **55** | **32** | **146** | **13,763** |
| Amounts used at end of period | (1,140) | (136) | (101) | (1) | (2) | (21) | (1,401) |
| Changes in the scope of consolidation | - | - | - | - | - | 3 | 3 |
| Net additions | 1,187 | 108 | 126 | 8 | 12 | 17 | 1,458 |
| Translation adjustment | - | (49) | - | - | (6) | (6) | (61) |
| Other | 3 | (50) | 1 | (3) | 5 | 1 | (43) |
| **PROVISIONS AT 12.31.2008** | **11,420** | **141** | **1,918** | **59** | **41** | **140** | **13,719** |

## 36.2 Provisions for post-employment benefits

### 36.2.1 French and foreign subsidiaries not covered by the special IEG system

Pension obligations principally relate to British, German and Italian companies are mostly covered by defined-benefit plans. British Energy manages two defined-benefit plans, one that covers most of the Group's employees and another specific plan for employees of the Eggborough plant.

For non-French subsidiaries and French subsidiaries not governed by the IEG regime, pension obligations are partly covered by external funds. The present value of these fund assets is €6.2 billion at December 31, 2009 (€2.4 billion at December 31, 2008). Following the downturn on the financial markets and falling interest rates combined with an anticipated rise in inflation, the deficit for the EDF Energy and British Energy pension funds, which amounted to €271 million at December 31, 2008, increased during 2009 to €1,795 million at December 31, 2009. The next three-year actuarial pension fund review is due to take place in 2010.

Unamortized actuarial gains and losses have thus risen significantly in the UK, and this will lead to an increase in the corresponding amortization expense in 2010.

## 36.2.2 French subsidiaries covered by the IEG system

### – Pensions

The main measures of the financing reform for the special IEG pension system took effect at January 1, 2005.
Following the financing reform for the special IEG pension system that took place in 2004, provisions recorded for the special pension system correspond to the specific benefits of employees, *i.e.* benefits not covered by the standard benefit systems.

The provision for pensions thus covers:
- specific benefits of employees in the deregulated or competitive activities;
- specific benefits earned by employees from January 1, 2005 for the regulated activities (transmission and distribution) (past benefits were financed by the CTA levy (*Contribution Tarifaire d'Acheminement*));
- specific benefits of employees benefiting from early retirement before the standard legal retirement age.

The valuation also includes CNIEG management expenses payable by EDF for the administration and payment of retired employees' pensions by the CNIEG.

These provisions amount to €8,970 million at December 31, 2009 (€8,796 million at December 31, 2008).

### – Other post-employment benefits

In addition to pensions, other benefits are granted to employees not currently in active service, as detailed below:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Benefits in kind (electricity/gas) | 1,176 | 1,135 |
| Retirement gratuities | 8 | (3) |
| Bereavement benefit | 287 | 283 |
| Bonus paid leave | 217 | 202 |
| Other post-employment | 81 | 65 |
| **PROVISIONS FOR POST-EMPLOYMENT BENEFITS** | **1,769** | **1,682** |
| **France** | **1,751** | **1,665** |
| **Rest of Europe** | **18** | **17** |

***• Benefits in kind (electricity/gas)***
Article 28 of the IEG national statutes entitles all employees (active or inactive) to benefits in kind in the form of supplies of electricity or gas at the preferential "Employee price". EDF's obligation for supplies of energy to EDF and GDF SUEZ employees corresponds to the probable present value of kWhs supplied to beneficiaries during their retirement, valued on the basis of the unit cost, taking into account the payment received under the energy exchange agreement with GDF SUEZ;

***• Retirement gratuities***
Retirement gratuities are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependents if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy;

***• Bereavement benefit***
The bereavement benefit is paid out upon the death of an inactive or handicapped employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26 -§ 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to two months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred);

***• Bonus pre-retirement paid leave***
All employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment;

***• Other benefits***
Other benefits include end-of-studies bonuses, additional retirement indemnities and pensions for personnel seconded to Group companies.

## 36.3 Provisions for other long-term employee benefits

Personnel are also granted other long-term benefits. At December 31, 2009, the related obligations total €1,052 million for IEG status employees (€956 million at December 31, 2008). These benefits include:

- annuities following industrial accident, work-related illness or invalidity; like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or work-related illness, and invalidity annuities and benefits. The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions;
- long-service awards;
- specific benefits for employees who have been in contact with asbestos.

## 36.4 Changes in the discounted value of the obligation and fund assets

The main actuarial assumptions used for provisions for post-employment benefits and long-term employee benefits are summarized below:

| | France | | United Kingdom | | Germany | |
|---|---|---|---|---|---|---|
| | **2009** | 2008 | **2009** | 2008 | **2009** | 2008 |
| Discount rates applied to obligations | **5.25%** | 5.75% | **5.70%** | 6.50% | **5.75%** | 6.00% |
| Expected return on fund assets | **5.32%** | 5.04% | **6.30%** | 5.90% | **5.50%** | 5.00% |
| Pay increase rates | **2.00%** | 2.00% | **5.40%** | 4.58% | **3.00%** | 3.50% |

In France the discount rate for long-term obligations to employees is determined based on the return on a Government bond of comparable duration – the 2035 French Treasury bond, which has a duration of 16 years consistent with the duration of employee benefit obligations – plus a spread calculated on the leading non-financial companies.

The actual return on Group pension fund assets for 2009 is €1,146 million (€(784) million for 2008), reflecting the recovery of the financial markets after 2008 was marked by the financial crisis.

The significant variation in unamortized actuarial variances in France (€2,197 million) is primarily due to the change in the discount rate (5.25% at December 31, 2009 compared to 5.75% at December 31, 2008) and the differential between the expected return on fund assets and the actual return registered in the year.

For the portfolio of fund assets, in France a 25 base point variation in the expected return on fund assets would result in a 1.4% rise or fall in the expected expense for 2010.

The impact of a 25-point variation in the discount rate would be a 3.4% variation in the total value of obligations in France.

## 36.4.1 Changes in the discounted value of the obligation

| (in millions of Euros) | France | United Kingdom | Germany | Italy | Other International | Other Activities | Total |
|---|---|---|---|---|---|---|---|
| **Obligations at 01.01.2009** | **16,919** | **2,531** | **1,836** | **59** | **38** | **263** | **21,646** |
| Current year service cost | 446 | 95 | 23 | 4 | 5 | 12 | 585 |
| Interest expenses | 996 | 350 | 106 | 2 | 1 | 6 | 1,461 |
| Actuarial gains and losses | 1,342 | 2,018 | 58 | - | (1) | 14 | 3,431 |
| Effect of curtailment or settlement of a plan | - | 2 | - | - | - | - | 2 |
| Benefits paid | (933) | (259) | (108) | (9) | (8) | (10) | (1,327) |
| Contributions by plan participants | - | 29 | - | - | - | - | 29 |
| Past service cost vested | - | - | - | - | 1 | 1 | 2 |
| Past service cost not vested | - | - | - | - | 2 | - | 2 |
| Changes in scope of consolidation | - | 2,738 | (6) | 1 | 209 | - | 2,942 |
| Exchange rate | - | 379 | - | - | 8 | 1 | 388 |
| Other | 1 | - | - | (3) | 61 | (1) | 58 |
| **OBLIGATIONS AT 12.31.2009** | **18,771** | **7,883** | **1,909** | **54** | **316** | **286** | **29,219** |
| Fair value of fund assets | (6,388) | (5,981) | (36) | - | (85) | (125) | (12,615) |
| Unrecognized actuarial gains (losses) | (456) | (1,783) | 66 | - | 2 | (26) | (2,197) |
| Unrecognized past service cost | (154) | - | - | - | (3) | (1) | (158) |
| **NET PROVISIONS RECORDED** | **11,773** | **119** | **1,939** | **54** | **230** | **134** | **14,249** |
| **included:** | | | | | | | |
| **Provisions for post-employment benefits** | **11,773** | **119** | **1,939** | **54** | **230** | **134** | **14,249** |
| **Pension assets** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

The main factors contributing to the change in obligations result from consolidation of British Energy, CENG and SPE.

The total experience adjustment for France represents an actuarial gain of €192 million.

## 36.4.2 Change in the discounted value of fund assets

| (in millions of Euros) | France | United Kingdom | Germany | Other International | Other Activities | Total |
|---|---|---|---|---|---|---|
| **Fair value of dedicated financial assets as of 01.01.2009** | **(5,926)** | **(2,260)** | **(42)** | **-** | **(109)** | **(8,337)** |
| Expected return on fund assets | (327) | (303) | (2) | (1) | (1) | (634) |
| Net contributions | (605) | (325) | - | (1) | - | (931) |
| Actuarial gains and losses | (138) | (372) | (1) | (1) | - | (512) |
| Benefits paid through dedicated assets | 608 | 259 | 4 | 1 | (13) | 859 |
| Change rate | - | (356) | - | (2) | 1 | (357) |
| Other | - | (2,624) | 5 | (81) | (3) | (2,703) |
| **FAIR VALUE OF DEDICATED FINANCIAL ASSETS AS OF 12.31.2009** | **(6,388)** | **(5,981)** | **(36)** | **(85)** | **(125)** | **(12,615)** |

## 36.5 Breakdown of the value of fund assets

For France, this item includes €6,388 million of fund assets at December 31, 2009 (€5,926 million at December 31, 2008) to cover EDF's long-term employee benefit obligations allocated to retirement gratuities (covered 100%) and the specific benefits of the special pension system. They consist of insurance contracts.

At December 31, 2009, investments under the contracts in France break down as follows:

- for retirement gratuities: 47.1% equities, 52.9% bonds and monetary instruments (respectively 41.7% and 56.3% in 2008);
- for the special pension system: 35% equities, 65% bonds and monetary instruments (respectively 22.7% and 77.3% in 2008).

In the UK, investments undertaken to cover employee benefit obligations total €5,981 million: 42.2% equities and 47.8% bonds and monetary instruments, 4.6% real estate property and 5.4% of other investments.

The actuarial gains and losses registered for the year mainly concern France and the United Kingdom.

## 36.6 Post-employment and other long-term employee benefit expenses

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Current year service cost | (585) | (584) |
| Interest expense (current value method) | (1,461) | (1,228) |
| Expected return on fund assets | 634 | 522 |
| Actuarial gains and losses recorded during the year | 173 | (29) |
| Effect of curtailment or settlement of a plan | 2 | 2 |
| Cost of past service vested | 2 | 144 |
| Effects of limit | - | 10 |
| **NET CHARGES RELATED TO POST-EMPLOYMENT BENEFITS AND OTHER LONG-TERM BENEFITS** | **(1,235)** | **(1,163)** |

# Note 37 Other provisions and contingent liabilities



Details of changes in other provisions are as follows:

## 37.1 At December 31, 2009

| (in millions of Euros) | 12.31.2008 | Increases | Decreases | | Changes in scope of consolidation | Other changes | 12.31.2009 |
|---|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | | |
| Provisions for contingencies related to investments | 154 | 34 | (6) | - | - | - | 182 |
| Provisions for tax liabilities | 203 | 10 | (10) | - | - | 152 | 355 |
| Provisions for litigation | 495 | 62 | (51) | (57) | 75 | 5 | 529 |
| Provisions for onerous contracts | 241 | 228 | (588) | (129) | 1,224 | 53 | 1,029 |
| Other | 3,645 | 1,787 | (2,432) | (401) | 229 | (106) | 2,722 |
| **OTHER PROVISIONS** | **4,738** | **2,121** | **(3,087)** | **(587)** | **1,528** | **104** | **4,817** |

## 37.2 At December 31, 2008

| (in millions of Euros) | 12.31.2007 | Increases | Decreases | | Other changes | 12.31.2008 |
|---|---|---|---|---|---|---|
| | | | Utilizations | Reversals | | |
| Provisions for contingencies related to investments | 157 | 15 | (3) | (3) | (12) | 154 |
| Provisions for tax liabilities | 147 | 62 | (2) | - | (4) | 203 |
| Provisions for litigation | 576 | 100 | (155) | (40) | 14 | 495 |
| Provisions for onerous contracts | 302 | 72 | (82) | (43) | (8) | 241 |
| Other | 2,680 | 2,605 | (1,378) | (134) | (128) | 3,645 |
| **OTHER PROVISIONS** | **3,862** | **2,854** | **(1,620)** | **(220)** | **(138)** | **4,738** |

## 37.3 Other provisions

At December 31, 2009, the heading "Other" includes in particular:

- a provision of €501 million established following prolongation of the transition tariff system (*tarif réglementé transitoire d'ajustement du marché* – TaRTAM) to June 30, 2010 in application of the law of August 4, 2008 on economic modernization;
- a provision of €393 million for the contribution to preserve entitlements to unregulated benefits related to agreements signed with the complementary pension organizations (€383 million at December 31, 2008);
- provisions of €372 million for greenhouse gas emission rights, based on historical purchase prices (€397 million at December 31, 2008);
- provisions of €236 million relating to renewable energy certificates.

The heading "Provisions for litigation" includes a provision relating to a dispute with social security bodies.

Provisions for onerous contracts include the fair value of British Energy sales contracts, amounting to €838 million at December 31, 2009.

## 37.4 Contingent liabilities

### – Tax inspection

In 2008 and 2009, EDF's accounts were inspected for the tax years 2004, 2005 and 2006. At the end of 2009, the Company was notified of a proposed tax reassessment for the period covered. EDF is contesting most of the corrections notified.

In 2008 and 2009, RTE EDF Transport's accounts were inspected for the tax years 2005, 2006 and 2007. In the second half of 2009, the Company was notified of a proposed tax reassessment for the period covered. RTE EDF Transport is contesting most of the corrections notified.

### – Labor litigation

EDF is party to a number of labor lawsuits with employees, primarily regarding the calculation and implementation of rest periods. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and financial position. However, because they concern situations likely to involve a large number of EDF's employees in France, these litigations could present a systemic risk which could have a material, negative impact on the Group's financial results.

### – Edipower

Proceedings are continuing in the action brought before the court of Rome by ACEA against several parties, including among others AEM Spa (now named A2A Spa), EDF, Edipower Spa and Edison Spa. ACEA is claiming that the joint level of investment in Edison by EDF and AEM violates the 30% limit applicable to public companies' stakes in Edipower, as set by the decree of November 8, 2000. It argues that exceeding the 30% limit constitutes unfair competition as defined by the Italian Civil Code, and is detrimental to ACEA. Consequently ACEA is claiming compensation and asking for measures to be taken to put an end to the situation, for example divestment of investments held in excess of the stated level and a ban on receiving energy generated by Edipower above the authorized quantities.

# Note 38 Specific French public electricity distribution concession liabilities for existing assets and assets to be replaced

The changes in specific concession liabilities for existing assets and assets to be replaced are as follows at December 31, 2009:

| *(in millions of Euros)* | 12.31.2008 | Change over the period | 12.31.2009 |
|---|---|---|---|
| Value in kind of assets | 36,663 | 1,107 | 37,770 |
| Unamortized financing by the operator | (17,638) | (465) | (18,103) |
| **Rights in existing assets - net value** | **19,025** | **642** | **19,667** |
| Amortization of financing by the grantor | 8,360 | 527 | 8,887 |
| Provision for renewal | 11,131 | 199 | 11,330 |
| **Rights in assets to be replaced** | **19,491** | **726** | **20,217** |
| **SPECIFIC FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSION LIABILITIES FOR EXISTING ASSETS AND ASSETS TO BE REPLACED** | **38,516** | **1,368** | **39,884** |

# Note 39 Current and non-current financial liabilities



## 39.1 Breakdown between current and non-current financial liabilities

Current and non-current financial liabilities break down as follows:

| *(in millions of Euros)* | 12.31.2009 Non-current | 12.31.2009 Current | 12.31.2009 Total | 12.31.2008 Non-current | 12.31.2008 Current | 12.31.2008 Total |
|---|---|---|---|---|---|---|
| Loans and other financial liabilities | 43,941 | 9,927 | 53,868 | 25,416 | 12,035 | 37,451 |
| Negative fair value of derivatives held for trading | - | 3,610 | 3,610 | - | 3,232 | 3,232 |
| Negative fair value of hedging derivatives | 814 | 3,023 | 3,837 | 168 | 3,691 | 3,859 |
| **FINANCIAL LIABILITIES** | **44,755** | **16,560** | **61,315** | **25,584** | **18,958** | **44,542** |

At December 31, 2009, the fair value of derivatives is determined on the basis of listed prices (1%), observable prices (96%) and internal valuation models (3%).

# 39.2 Loans and other financial liabilities

## 39.2.1 Changes in loans and other financial liabilities

| *(in millions of Euros)* | Bonds | Loans from financial institutions | Other financial liabilities | Loans related to finance leased assets | Accrued interest | Total |
|---|---|---|---|---|---|---|
| **Balances at 12.31.2007** | **14,943** | **4,168** | **8,138** | **237** | **444** | **27,930** |
| Increases | 10,649 | 2,783 | 2,319 | - | 196 | 15,947 |
| Decreases | (1,425) | (2,064) | (1,989) | (61) | (41) | (5,580) |
| Changes in scope of consolidation | 3 | 23 | (116) | - | - | (90) |
| Translation adjustments | (874) | (13) | 24 | - | (55) | (918) |
| Other | 194 | (38) | (84) | 59 | 31 | 162 |
| **Balances at 12.31.2008** | **23,490** | **4,859** | **8,292** | **235** | **575** | **37,451** |
| Increases | 18,904 | 11,128 | 413 | - | 702 | 31,147 |
| Decreases | (2,766) | (9,926) | (2,929) | (73) | (44) | (15,738) |
| Changes in scope of consolidation | 597 | 304 | 109 | 8 | 4 | 1,022 |
| Translation adjustments | 185 | 184 | 49 | - | 100 | 518 |
| Other | (338) | (99) | (42) | 76 | (129) | (532) |
| **BALANCES AT 12.31.2009** | **40,072** | **6,450** | **5,892** | **246** | **1,208** | **53,868** |

EDF undertook several major bond issues during 2009:

- on January 23, 2009, two bond issues in Euros. The first is a 6-year bond totaling €2 billion, with annual coupon of 5.125%. The second is a 12-year bond totaling €2 billion with annual coupon of 6.25%;
- on January 26, 2009, a $5 billion bond on the US market in the form of a private placement reserved for institutional investors (governed by Rule 144A of the US Securities and Exchange Commission), in three installments:
  - a 5-year $1.25 billion installment with coupon of 5.50%,
  - a 10-year $2 billion installment with coupon of 6.50%,
  - a 30-year $1.75 billion installment with coupon of 6.95%;
- on March 3, 2009, bond issues on the Swiss market:
  - one CHF 350 million issue with 3-year maturity and annual coupon of 2%,
  - one CHF 300 million issue with 8-year maturity and annual coupon of 4%;
- on June 2, 2009, a £1.5 billion bond issue with 25-year maturity and annual coupon of 6.125% as part of its EMTN program;
- on July 17, 2009, a 5-year €3.3 billion retail bond issue for private investors in France, bearing interest at the fixed rate of 4.5%;
- in July 2009, issue of five bonds in Japan totaling JPY 120.4 billion, with maturities ranging from 2012 to 2016;
- on September 11, 2009, a €2.5 billion bond issue with 15-year maturity bearing interest at 4.625%;
- on July 7, 2009, EnBW issued two bonds totaling €1,350 million (EDF's share: €622 million):
  - one €750 million bond with 6-year maturity and annual coupon of 4.125%,
  - and a €600 million bond with 30-year maturity and annual coupon of 6.125%;
- on November 12, 2009, EDF Energy issued three bonds totaling £950 million:
  - £300 million maturing in November 2016 with annual coupon of 5.125%,
  - £300 million maturing in November 2031 with annual coupon of 6.125%,
  - £350 million maturing in November 2036 with annual coupon of 6%.

These operations contribute to the financing of the Group's investment strategy and early repayment of the bank loan used in January 2009 for the acquisition of British Energy.

Edison also made drawings on credit lines, essentially to finance the investment in the Abu Qir gasfields, and in July 2009 it issued a €700 million bond (EDF's share: €343 million) as part of its EMTN program.

Loans and other financial liabilities of the Group's main entities are as follows:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| EDF SA and other affiliated subsidiaries (1) | 30,756 | 21,303 |
| EDF Energy (2) | 11,943 | 7,668 |
| EnBW | 3,416 | 2,551 |
| EDF Énergies Nouvelles | 3,295 | 1,916 |
| Edison (3) | 2,302 | 1,572 |
| Others | 2,156 | 2,441 |
| **GROSS INDEBTEDNESS** | **53,868** | **37,451** |

*(1) ERDF, RTE, PEI, EDF International and EDF Investissement Groupe.*

*(2) Including holding companies.*

*(3) Edison excluding TDE.*

At December 31, 2009, none of these entities was in default on any borrowing.

The Group's principal borrowings at December 31, 2009 are as follows:

| *(in millions)* | Entity | Issue | Maturity | Issuance Amount | Currency | Rate |
|---|---|---|---|---|---|---|
| Euro MTN | EDF | 07/2000 | 10/2010 | 1,000 | EUR | 5.8% |
| Bond | Edison | 02/2007 | 12/2011 | 900 | EUR | 1-month Euribor |
| Euro MTN | EnBW | 02/2002 | 02/2012 | 1,000 | EUR | 5.9% |
| Bond | TDE | 09/2005 | 09/2012 | 1,200 | EUR | 3-month Euribor |
| Euro MTN | EDF | 11/2008 | 01/2013 | 2,000 | EUR | 5.6% |
| Euro MTN | EnBW | 11/2008 | 11/2013 | 750 | EUR | 6.0% |
| Bond | EDF | 01/2009 | 01/2014 | 1,250 | USD | 5.5% |
| Euro MTN | EDF | 07/2009 | 07/2014 | 3,269 | EUR | 4.5% |
| Euro MTN | EDF | 01/2009 | 01/2015 | 2,000 | EUR | 5.1% |
| Bond | RTE EDF Transport | 06/2008 | 05/2015 | 1,250 | EUR | 4.9% |
| Euro MTN | EnBW | 07/2009 | 07/2015 | 750 | EUR | 4.1% |
| Bond | RTE EDF Transport | 09/2006 | 09/2016 | 1,000 | EUR | 4.1% |
| Euro MTN | EDF | 10/2001 | 10/2016 | 1,100 | EUR | 5.5% |
| Euro MTN | EDF | 02/2008 | 02/2018 | 1,500 | EUR | 5.0% |
| Bond | RTE EDF Transport | 08/2008 | 08/2018 | 1,000 | EUR | 5.1% |
| Euro MTN | EnBW | 11/2008 | 11/2018 | 750 | EUR | 6.9% |
| Bond | EDF | 01/2009 | 01/2019 | 2,000 | USD | 6.5% |
| Euro MTN | EDF | 05/2008 | 05/2020 | 1,200 | EUR | 5.4% |
| Euro MTN | EDF | 01/2009 | 01/2021 | 2,000 | EUR | 6.3% |
| Euro MTN | EDF | 09/2009 | 09/2024 | 2,500 | EUR | 4.6% |
| Euro MTN | EDF | 02/2003 | 02/2033 | 850 | EUR | 5.6% |
| Euro MTN | EDF | 05/2009 | 06/2034 | 1,500 | GBP | 6.1% |
| Bond | EDF | 01/2009 | 01/2039 | 1,750 | USD | 7.0% |

## 39.2.2 Maturity of loans and other financial liabilities

| *(in millions of Euros)* | Bonds | Loans from financial institutions | Other financial liabilities | Loans related to finance leased assets | Accrued interest | Total |
|---|---|---|---|---|---|---|
| Less than one year | 2,090 | 1,872 | 7,467 | 36 | 570 | 12,035 |
| From one to five years | 8,118 | 1,684 | 449 | 151 | 5 | 10,407 |
| More than five years | 13,282 | 1,303 | 376 | 48 | - | 15,009 |
| **Loans and financial liabilities at 12.31.2008** | **23,490** | **4,859** | **8,292** | **235** | **575** | **37,451** |
| Less than one year | 2,046 | 1,599 | 5,043 | 41 | 1,198 | 9,927 |
| From one to five years | 12,244 | 2,676 | 593 | 144 | 10 | 15,667 |
| More than five years | 25,782 | 2,175 | 256 | 61 | - | 28,274 |
| **LOANS AND FINANCIAL LIABILITIES AT 12.31.2009** | **40,072** | **6,450** | **5,892** | **246** | **1,208** | **53,868** |

## 39.2.3 Breakdown of loans by currency

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **Initial debt structure** | **Impact of hedging derivatives (1)** | **Debt structure after hedging derivatives** | Initial debt structure | Impact of hedging derivatives (1) | Debt structure after hedging derivatives |
| Euro (EUR) | 37,232 | (10,356) | 26,876 | 28,326 | (3,499) | 24,827 |
| American Dollar (USD) | 5,081 | (32) | 5,049 | 2,273 | (692) | 1,581 |
| Pound sterling (GBP) | 7,386 | 11,463 | 18,849 | 4,152 | 4,225 | 8,377 |
| Other | 4,169 | (1,075) | 3,094 | 2,700 | (34) | 2,666 |
| **LOANS AND FINANCIAL LIABILITIES** | **53,868** | **-** | **53,868** | **37,451** | **-** | **37,451** |

*(1) Hedges of liabilities and net assets of foreign subsidiaries, and dollar/sterling swaps classified as economic hedges.*

## 39.2.4 Breakdown of loans by type of interest rate, before and after swaps

| | 12.31.2009 | | | 12.31.2008 | | |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **Initial debt structure** | **Impact of derivatives** | **Debt structure after derivatives** | Initial debt structure | Impact of derivatives | Debt structure after derivatives |
| Fixed rates | 44,569 | 613 | 45,182 | 29,680 | 739 | 30,419 |
| Floating rates | 9,299 | (613) | 8,686 | 7,771 | (739) | 7,032 |
| **LOANS AND FINANCIAL LIABILITIES** | **53,868** | **-** | **53,868** | **37,451** | **-** | **37,451** |

The breakdown of loans and financial liabilities by interest rate includes the impact of all derivatives designated as hedges in accordance with IAS 39.

## 39.2.5 Credit lines

At December 31, 2009, the Group has credit lines with various banks totaling €10,039 million (€21,388 million at December 31, 2008).

| | 12.31.2009 | | | | 12.31.2008 |
|---|---|---|---|---|---|
| | Total | Maturity | | | Total |
| *(in millions of Euros)* | | < 1 year | 1 - 5 years | > 5 years | |
| Confirmed credit lines | 10,039 | 1,302 | 8,737 | - | 21,388 |

The decrease since 2008 mainly results from extinguishment of the item corresponding to the £11 billion syndicated loan contracted by EDF for the purchase of British Energy.

## 39.2.6 Fair value of loans and other financial liabilities at December 31, 2009

| | 12.31.2009 | | 12.31.2008 | |
|---|---|---|---|---|
| *(in millions of Euros)* | Fair Value | Net book value | Fair Value | Net book value |
| **LOANS AND FINANCIAL LIABILITIES** | **57,014** | **53,868** | **36,587** | **37,451** |

# 39.3 Net indebtedness

Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months, that are readily convertible into cash regardless of their maturity and are managed according to a liquidity-oriented policy.

| *(in millions of Euros)* | Notes | 12.31.2009 | 12.31.2008 |
|---|---|---|---|
| Loans and other financial liabilities | 39.2.1 | 53,868 | 37,451 |
| Derivatives used to hedge liabilities | | 373 | (381) |
| Cash and cash equivalents | 31 | (6,982) | (5,869) |
| Liquid assets | 27.3.1 et 27.3.2 | (4,735) (1) | (6,725) (2) |
| Net financial liabilities from companies disclosed in non-current liabilities related to assets classified as held for sale | | (28) | - |
| **NET INDEBTEDNESS** | | **42,496** | **24,476** |

*(1) Available-for-sale financial assets: €4,538 million, financial assets carried at fair value: €197 million.*

*(2) Available-for-sale financial assets: €6,651 million, financial assets carried at fair value: €74 million.*

# 39.4 Changes in net indebtedness

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **Operating profit before depreciation and amortization (EBITDA)** | **17,466** | **14,240** |
| Cancellation of non-monetary items included in EBITDA | (3,105) | (3,699) |
| Change in net working capital (1) | (983) | (211) |
| Other items | 143 | 30 |
| **Net cash flow from operations** | **13,521** | **10,360** |
| Acquisitions of property, plant and equipment and intangible assets net of disposals | (12,118) | (9,489) |
| Net financial expenses disbursed | (1,408) | (1,068) |
| Income tax paid | (963) | (1,720) |
| Cancellation of the decision of the European Commission | 1,224 | - |
| **Free cash flow** (1) | **256** | **(1,917)** |
| Investments (2) | (16,238) | (6,090) |
| Dividends paid | (1,311) | (2,528) |
| Other items | (94) | 479 |
| **Monetary decrease in net indebtedness, excluding the impact of changes in the scope of consolidation and exchanges rates** | **(17,387)** | **(10,056)** |
| Effects of change in the scope of consolidation | 453 | 138 |
| Effects of exchange rate fluctuations | (760) | 1,473 |
| Other non-monetary changes | (326) | 238 |
| **(Increase) / Decrease in net indebtedness** | **(18,020)** | **(8,207)** |
| **Net indebtedness at beginning of period** | **24,476** | **16,269** |
| **NET INDEBTEDNESS AT END OF PERIOD** | **42,496** | **24,476** |

*(1) The change in working capital for 2008 includes reclassification of the payment due to AREVA for the La Hague reprocessing plant as an item of trade payables (€2,300 million). In 2009 it included a corresponding payment of €(605) million. Consequently, the free cash flow in this presentation reflects this payment.*

*(2) The main financial investments of 2009 are:*
- *acquisition of the shares of British Energy as part of the purchase offer and subsequent squeeze-out offer for €10,827 million, offset in November 2009 by the sale of 20% of these shares to Centrica for €(2,470) million (see note 5.1);*
- *€2,508 million for the acquisition of 49.99% of CENG;*
- *approximately €1.4 billion for the acquisitions of EWE, Lippendorf and Bexbach by EnBW;*
- *€1,328 million for the acquisition of 51% of SPE;*
- *€495 million for Edison's investment in the Abu Qir gasfields;*
- *a gross allocation of €1,902 million to dedicated assets.*

## 39.5 Guarantees of borrowings

Guarantees of borrowings by the Group at December 31, 2009 comprise the following:

| (in millions of Euros) | 12.31.2009 Total | Maturity < 1 year | Maturity 1 - 5 years | Maturity > 5 years | 12.31.2008 Total |
|---|---|---|---|---|---|
| Security interests in real property | 2,767 | 207 | 1,101 | 1,459 | 2,166 |
| Guarantees related to borrowings | 323 | 23 | 48 | 252 | 429 |
| Other financing commitments | 241 | 182 | 10 | 49 | 564 |
| **FINANCING COMMITMENTS GIVEN** | **3,331** | **412** | **1,159** | **1,760** | **3,159** |
| **FINANCING COMMITMENTS RECEIVED*** | **184** | **148** | **29** | **7** | **69** |

** Excluding credit lines (see note 39.2.5).*

Security interests in real property and assets provided as guarantees mainly concern property, plant and equipment and take the form of pledges or mortgages, and shares representing investments in consolidated subsidiaries which own property, plant and equipment. The net book value of current and non-current assets given as guarantees is €2,767 million (€2,166 million in 2008).

Guarantees of borrowings were principally given by EDF and EDF International.
The lower level of financing commitments given in 2009 results from expiry of the €431 million interim backstop borrowing facility granted to CEG.

Financing commitments received mainly concern EDF, EDF Énergies Nouvelles and Unistar Nuclear Energy.

# Note 40 Management of financial risks

As an operator in the energy sector worldwide, the EDF group is exposed to risks related to interest rates, exchange rates and fluctuations in commodity prices. The Group uses derivatives in various hedging strategies to eliminate or limit these financial risks, but not for speculative purposes.

To that end, the Group has set up a dedicated body responsible for defining the risk management policy and its governing principles, and supervising their correct application.

EDF entities and Group subsidiaries, particularly EDF Trading, EDF Energy, EnBW and Edison have adapted these principles as appropriate for management of the risks inherent to their business.

Risks related to exchange rate, interest rate and commodity price fluctuations create volatility affecting Group results, equity and cash flows.

The main derivatives used are forward exchange contracts and currency swaps, interest rate swaps, cross currency swaps and commodity futures, forwards and swaps.

The equity risk lies essentially in the portfolio to cover nuclear obligations, and to a lesser degree in long-term investments for EDF's cash management.

On the energy markets, the Group enters into trading operations on the wholesale electricity, $CO_2$ and fossil fuel markets, mainly through its subsidiary EDF Trading. EDF Trading's spot and forward transactions mostly involve instruments such as forward contracts (with or without physical delivery), swaps and options.

While EDF Trading is responsible for controlling its own exposure to energy market risks, its commitments on the markets are also managed at Group level through a "Value at risk" (VaR) limit with a Stop-loss limit.

The credit risk covers the risk of unpaid trade receivables and the risk of default on contractual obligations by counterparties, and the Group has an appropriate risk management policy based on the four following principles:

- close monitoring of the Group's counterparties (a daily report on alerts and specific conservative measures for certain counterparties);
- a methodology to assign exposure limits for each counterparty, related to financial and energy markets;
- monthly consolidation of exposure to counterparty risk on financial and energy market activities and quarterly consolidation across all activities;
- introduction of a loss limit for the Group and for each entity, and compliance monitoring by the Corporate Credit Committee.

Regarding the risk of customer default, another component of the counterparty risk, a statement of receivables not yet due and overdue is shown in note 29.

In the special case of EDF Trading, credit risk is partly covered by bilateral margin agreements and letters of credit.

The 2009 Management Report (section 1.9) supplies additional information to complement this note.

# Note 41 Derivatives and hedge accounting



Hedge accounting is applied in compliance with IAS 39, and concerns interest rate derivatives used to hedge long-term indebtedness, currency derivatives used to hedge net foreign investments and debts in foreign currencies, and currency and commodity derivatives used to hedge future cash flows.

The fair value of hedging derivatives reported in the balance sheet breaks down as follows:

| *(in millions of Euros)* | Notes | 12.31.2009 | 12.31.2008 |
|---|---|---|---|
| Positive fair value of hedging derivatives | 27.1 | 2,895 | 3,705 |
| Negative fair value of hedging derivatives | 39.1 | (3,837) | (3,859) |
| **FAIR VALUE OF HEDGING DERIVATIVES** | | **(942)** | **(154)** |
| Including Interest rate hedging derivatives | 41.4.1 | (18) | (64) |
| Including Foreign currency hedges | 41.4.2 | 273 | 1,795 |
| Including Cash flow hedge commodity derivatives | 41.4.3 | (1,205) | (1,851) |
| Including Commodity-related fair value hedges | 41.5 | 7 | (34) |

The fair value of hedging derivatives is determined on the basis of:

- listed prices: 1%;
- observable data: 98%;
- internal valuation models: 1%.

## 41.1 Fair value hedges

The EDF group hedges the exposure to changes in the fair value of fixed-rate debts. The derivatives used for this hedging are fixed/floating interest rate swaps and cross currency swaps, with changes in fair value recorded in the income statement. Fair value hedges also include currency hedging instruments on certain firm purchase commitments.

At December 31, 2009, the ineffective portion of fair value hedges represents a loss of €7 million (loss of €6 million at December 31, 2008), included in the financial result.

## 41.2 Cash flow hedges

The EDF group uses cash flow hedging principally for the following purposes:

- to hedge its floating-rate debt, using interest-rate swaps (floating/fixed rate);
- to hedge the exchange rate risk related to debts contracted in foreign currencies, using cross currency swaps;
- to hedge future cash flows related to expected sales and purchases of electricity, gas, and coal, using futures, forwards and swaps.

The EDF group also hedges the currency risk associated with fuel and commodity purchases.

At December 31, 2009, the ineffective portion of cash flow hedges represents a gain of €2 million (loss of €5 million at December 31, 2008).

## 41.3 Hedges of net investments in foreign entities

Hedging of net foreign investments is used for protection against exposure to the exchange rate risk related to net investments in the Group's foreign entities.

This risk is hedged at group level either by contracting debts for investments in the same currency, or through the markets, in which case the Group uses currency swaps and forward exchange contracts.

# 41.4 Impact of hedging derivatives on equity

Changes in the fair value of hedging derivatives included in equity (EDF's share) over the year are as follows:

**– In 2009**

| *(in millions of Euros)* | Gross changes in fair value recorded in equity (1) | Taxes related to gross changes recorded in equity | Changes after taxes in fair value recorded in equity (1) | Ineffectiveness | Gross changes in fair value transferred to income (2) | Taxes related to changes in fair value transferred to income | Changes after taxes in fair value transferred to income (2) |
|---|---|---|---|---|---|---|---|
| Derivatives on: | | | | | | | |
| Interest rate hedging | 3 | 2 | 5 | - | - | - | - |
| Exchange rate hedging | (797) | 261 | (536) | - | (234) | 82 | (152) |
| Net foreign exchange hedging | (181) | 240 | 59 | - | - | - | - |
| Commodity hedging | (412) | 160 | (252) | 2 | (1,095) | 389 | (706) |
| **HEDGING DERIVATIVES** | **(1,387)** | **663** | **(724)** | **2** | **(1,329)** | **471** | **(858)** |

*(1) + / ( ): increase/decrease in equity (EDF's share).*

*(2) + / ( ): increase/decrease in net income.*

The main components of the €(252) million negative change, after tax, in the fair value of commodity hedging derivatives are:

- €(488) million on electricity hedging contracts;
- €(20) million on coal hedging contracts;
- €217 million on oil product hedging contracts.

The main components of the amount of €(706) million after tax transferred to income in respect of commodity hedges terminated during the year are:

- €(734) million on electricity hedging contracts;
- €280 million on gas hedging contracts;
- €(142) million on oil product hedging contracts.

**– In 2008**

| *(in millions of Euros)* | Gross changes in fair value recorded in equity (1) | Taxes related to gross changes recorded in equity | Changes after taxes in fair value recorded in equity (1) | Ineffectiveness | Gross changes in fair value transferred to income (2) | Taxes related to changes in fair value transferred to income | Changes after taxes in fair value transferred to income (2) |
|---|---|---|---|---|---|---|---|
| Derivatives on: | | | | | | | |
| Interest rate hedging | (90) | 20 | (70) | (2) | - | - | - |
| Exchange rate hedging | 362 | (106) | 256 | - | (62) | 21 | (41) |
| Net foreign exchange hedging | 857 | (294) | 563 | - | - | - | - |
| Commodity hedging | (3,216) | 1,012 | (2,204) | (3) | (296) | 90 | (206) |
| **HEDGING DERIVATIVES** | **(2,087)** | **632** | **(1,455)** | **(5)** | **(358)** | **111** | **(247)** |

*(1) + / ( ): increase/decrease in equity (EDF's share).*

*(2) + / ( ): increase/decrease in net income.*

The main components of the €2,204 million negative change, after tax, in the fair value of commodity hedging derivatives are:
- €(1,137) million on electricity hedging;
- €(434) million on coal hedging contracts;
- €(306) million on oil product hedging contracts.

The main components of the amount of €(206) million after tax transferred to income in respect of commodity hedges terminated during the year are:
- €(339) million on electricity hedging;
- €(111) million on gas hedging;
- € + 201 million on coal hedging.

## 41.4.1 Interest rate hedging derivatives

Interest rate hedging derivatives break down as follows:

| | Notional at 12.31.2009 | | | | Notional at 12.31.2008 | Fair value | |
|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | < 1 year | 1 - 5 years | > 5 years | Total | Total | 12.31.2009 | 12.31.2008 |
| Purchases of forward contracts | - | - | - | - | - | - | 1 |
| Purchases of CAP contracts | - | 90 | 8 | 98 | 7 | - | - |
| Purchases of options | - | 170 | - | 170 | - | - | - |
| Sales of options | - | - | - | - | 1 | - | 1 |
| **Interest rate transactions** | **-** | **260** | **8** | **268** | **8** | **-** | **2** |
| Fixed rate payer / floating rate receiver | 189 | 1,676 | 1,013 | 2,878 | 1,975 | (57) | (101) |
| Floating rate payer / fixed rate receiver | - | 1,160 | 1,026 | 2,186 | 1,228 | 39 | 53 |
| Variable / variable | - | - | - | - | 241 | - | (18) |
| **Interest rate swaps** | **189** | **2,836** | **2,039** | **5,064** | **3,444** | **(18)** | **(66)** |
| **INTEREST RATE HEDGING DERIVATIVES** | **189** | **3,096** | **2,047** | **5,332** | **3,452** | **(18)** | **(64)** |

The fair value of interest rate/exchange rate cross-currency swaps comprises the interest rate effect only.

The notional value of cross-currency swaps is included both in this note and the note on exchange rate hedging derivatives (41.4.2).

## 41.4.2 Exchange rate hedging derivatives

Exchange rate hedging derivatives break down as follows:

**– At December 31, 2009**

| | Notional amount to be received at 12.31.2009 | | | | Notional amount to be given at 12.31.2009 | | | Fair value | |
|---|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | < 1 year | 1 - 5 years | > 5 years | Total | < 1 year | 1 - 5 years | > 5 years | Total | 12.31.2009 |
| Forward exchange transactions | 5,431 | 3,348 | - | 8,779 | 5,120 | 2,969 | - | 8,089 | 109 |
| Swaps | 10,247 | 7,898 | 5,707 | 23,852 | 10,199 | 7,659 | 5,567 | 23,425 | 164 |
| Options | 72 | - | - | 72 | 74 | - | - | 74 | - |
| **FOREIGN CURRENCY HEDGES** | **15,750** | **11,246** | **5,707** | **32,703** | **15,393** | **10,628** | **5,567** | **31,588** | **273** |

The notional value of cross-currency swaps shown in this note is also included in the note on interest rate hedging derivatives (41.4.1).

**– At December 31, 2008**

| | Notional amount to be received at 12.31.2008 | | | | Notional amount to be given at 12.31.2008 | | | Fair value | |
|---|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | < 1 year | 1 - 5 years | > 5 years | Total | < 1 year | 1 - 5 years | > 5 years | Total | 12.31.2008 |
| Forward exchange transactions | 4,880 | 3,743 | 73 | 8,696 | 5,879 | 3,897 | 35 | 9,811 | 553 |
| Swaps | 4,546 | 3,085 | 2,126 | 9,757 | 3,893 | 2,502 | 1,469 | 7,864 | 1,232 |
| Options | 502 | - | - | 502 | 502 | - | - | 502 | 10 |
| **FOREIGN CURRENCY HEDGES** | **9,928** | **6,828** | **2,199** | **18,955** | **10,274** | **6,399** | **1,504** | **18,177** | **1,795** |

The fair value of interest rate/exchange rate cross-currency swaps comprises the exchange rate effect only.

## 41.4.3 Commodity-related cash flow hedges

Details of commodity-related cash flow hedges are as follows:

| | Units of measure | 12.31.2009 Net notionals < 1 year | From 1 to 5 years | > 5 years | Total | 12.31.2009 Fair value | 12.31.2008 Net notionals Total | 12.31.2008 Fair value |
|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | | | | | | | | |
| Swaps | | - | - | - | - | - | - | 1 |
| Forwards/futures | | 41 | 17 | - | 58 | (585) | 35 | (748) |
| **Power** | TWh | **41** | **17** | **-** | **58** | **(585)** | **35** | **(747)** |
| Swaps | | 17 | - | - | 17 | - | - | - |
| Forwards/futures | | 555 | 611 | - | 1,166 | (236) | 1,524 | (9) |
| **Gas** | Millions of therms | **572** | **611** | **-** | **1,183** | **(236)** | **1,524** | **(9)** |
| Swaps | | 16,468 | 10,175 | - | 26,643 | 93 | 19,873 | (638) |
| Forwards/futures | | - | - | - | - | - | 477 | (11) |
| **Oil products** | Thousands of barrels | **16,468** | **10,175** | **-** | **26,643** | **93** | **20,350** | **(649)** |
| Swaps | | 12 | 7 | - | 19 | (333) | 25 | (403) |
| Forwards/futures | | - | - | - | - | 1 | - | (2) |
| **Coal** | Millions of tonnes | **12** | **7** | **-** | **19** | **(332)** | **25** | **(405)** |
| Forwards/futures | | 9,608 | 3,377 | - | 12,985 | (145) | 17,327 | (41) |
| **$CO_2$** | Thousands of tonnes | **9,608** | **3,377** | **-** | **12,985** | **(145)** | **17,327** | **(41)** |
| **CASH FLOW HEDGE COMMODITY DERIVATIVES** | | | | | | **(1,205)** | | **(1,851)** |

# 41.5 Commodity-related fair value hedges

Details of commodity-related fair value hedges are as follows:

| | Units of measure | 12.31.2009 Net notionals | 12.31.2009 Fair value | 12.31.2008 Net notionals | 12.31.2008 Fair value |
|---|---|---|---|---|---|
| *(in millions of Euros)* | | | | | |
| Swaps | | 175 | (11) | - | - |
| **Gas** | Millions of therms | **175** | **(11)** | **-** | **-** |
| **Coal and freight** | Millions of tonnes | **(18)** | **18** | **(9)** | **(34)** |
| **FAIR VALUE HEDGING COMMODITY DERIVATIVES** | | | **7** | | **(34)** |

# Note 42 Derivative instruments not recorded as hedges



Details of the fair value of trading derivatives reported in the balance sheet are as follows:

| *(in millions of Euros)* | Notes | 12.31.2009 | 12.31.2008 |
|---|---|---|---|
| Derivatives - positive fair value | 27.3.1 | 4,662 | 4,753 |
| Derivatives - negative fair value | 39.1 | (3,610) | (3,232) |
| **DERIVATIVES - FAIR VALUE** | | **1,052** | **1,521** |
| Including Interest rate derivatives held for trading | 42.1 | 27 | 18 |
| Including Currency derivatives held for trading | 42.2 | (58) | 144 |
| Including Non hedging commodity derivatives | 42.3 | 1,083 | 1,359 |

The fair value of derivative instruments held for trading is determined on the basis of:
- observable data: 95%;
- internal valuation models: 5%.

## 42.1 Interest rate derivatives held for trading

Interest rate derivatives held for trading break down as follows:

| | Notional at 12.31.2009 | | | | Notional at 12.31.2008 | Fair value | |
|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **< 1 year** | **1 - 5 years** | **> 5 years** | **Total** | Total | **12.31.2009** | 12.31.2008 |
| Purchases of CAP contracts | - | - | - | - | 147 | - | - |
| Sales of FLOOR contracts | - | - | - | - | 294 | - | - |
| **Interest rate transactions** | **-** | **-** | **-** | **-** | **441** | **-** | **-** |
| Fixed rate payer / floating rate receiver | 917 | 869 | 1,476 | 3,262 | 1,962 | (161) | (97) |
| Floating rate payer / fixed rate receiver | 2,150 | 974 | 1,466 | 4,590 | 7,125 | 188 | 150 |
| Variable / variable | 7 | 40 | 158 | 205 | 221 | - | (35) |
| **Interest rate swaps** | **3,074** | **1,883** | **3,100** | **8,057** | **9,308** | **27** | **18** |
| **INTEREST RATE DERIVATIVES HELD FOR TRADING** | **3,074** | **1,883** | **3,100** | **8,057** | **9,749** | **27** | **18** |

# 42.2 Currency derivatives held for trading

Currency derivatives held for trading break down as follows:

**– At December 31, 2009**

| | Notional amount to be received at 12.31.2009 | | | | Notional amount to be given at 12.31.2009 | | | | Fair value |
|---|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **< 1 year** | **1 - 5 years** | **> 5 years** | **Total** | < 1 year | 1 - 5 years | > 5 years | Total | 12.31.2009 |
| Forward transactions | 2,781 | 794 | 28 | **3,603** | 2,788 | 766 | 28 | 3,582 | (17) |
| Swaps | 2,689 | 220 | - | **2,909** | 2,704 | 238 | - | 2,942 | (41) |
| **CURRENCY DERIVATIVES HELD FOR TRADING** | **5,470** | **1,014** | **28** | **6,512** | **5,492** | **1,004** | **28** | **6,524** | **(58)** |

**– At December 31, 2008**

| | Notional amount to be received at 12.31.2008 | | | | Notional amount to be given at 12.31.2008 | | | | Fair value |
|---|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **< 1 year** | **1 - 5 years** | **> 5 years** | **Total** | < 1 year | 1 - 5 years | > 5 years | Total | 12.31.2008 |
| Forward transactions | 3,488 | 297 | 44 | **3,829** | 3,402 | 289 | 45 | 3,736 | 39 |
| Swaps | 6,371 | 586 | - | **6,957** | 6,304 | 564 | - | 6,868 | 106 |
| Options | 182 | - | - | **182** | 40 | - | - | 40 | (1) |
| **CURRENCY DERIVATIVES HELD FOR TRADING** | **10,041** | **883** | **44** | **10,968** | **9,746** | **853** | **45** | **10,644** | **144** |

# 42.3 Commodity derivatives not classified as hedges

Details of commodity derivatives not classified as hedges are as follows:

| | | 12.31.2009 | 12.31.2009 | 12.31.2008 | 12.31.2008 |
|---|---|---|---|---|---|
| *(in millions of Euros)* | Units of measure | Net notionals | Fair value | Net notionals | Fair value |
| Swaps | | (2) | 651 | (2) | (19) |
| Options | | 18 | 159 | 13 | (92) |
| Forwards/futures | | (27) | (539) | (20) | 152 |
| **POWER** | TWh | **(11)** | **271** | **(9)** | **41** |
| Swaps | | 17 | (33) | - | 8 |
| Options | | 89,172 | 24 | 86,466 | 54 |
| Forwards/futures | | 837 | 113 | (1,232) | 202 |
| **Gas** | Millions of therms | **90,026** | **104** | **85,234** | **264** |
| Swaps | | (8,653) | 52 | (13,712) | 68 |
| Options | | (3,156) | 1 | 1,200 | 8 |
| Forwards/futures | | 1,585 | (21) | 1,680 | (39) |
| **Oil products** | Thousands of barrels | **(10,224)** | **32** | **(10,832)** | **37** |
| Swaps | | (53) | (75) | (63) | 651 |
| Options | | - | - | - | - |
| Forwards/futures | | 104 | 328 | 87 | 51 |
| Freight | | 19 | (8) | 11 | 75 |
| **Coal** | Millions of tonnes | **70** | **245** | **35** | **777** |
| Swaps | | (303) | (14) | - | (30) |
| Options | | - | - | - | - |
| Forwards/futures | | 13,069 | 531 | 5,726 | 269 |
| **$CO_2$** | Thousands of tonnes | **12,766** | **517** | **5,726** | **239** |
| Swaps | | - | (91) | - | - |
| **Other** | | **-** | **(91)** | **-** | **-** |
| **Embedded commodity derivatives** | | **-** | **5** | **-** | **1** |
| **NON HEDGING COMMODITY DERIVATIVES** | | | **1,083** | | **1,359** |

These mainly include contracts included in EDF Trading's portfolio.

# Note 43 Trade payables

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Trade payables and related accounts excluding EDF Trading | 10,694 | 10,967 |
| Trade payables and related accounts of EDF Trading | 2,654 | 2,990 |
| **TRADE PAYABLES** | **13,348** | **13,957** |

# Note 44 Other liabilities

Details of other liabilities are as follows:

| *(in millions of Euros)* | 12.31.2009 | 12.31.2008 |
|---|---|---|
| Advances received | 5,277 | 4,783 |
| Liabilities related to property, plant and equipment | 2,216 | 2,096 |
| Tax and social charges | 6,884 | 6,671 |
| Deferred income | 8,312 | 8,027 |
| Other | 5,334 | 4,248 |
| **OTHER LIABILITIES** | **28,023** | **25,825** |
| Non current | 5,725 | 5,628 |
| Current | 22,298 | 20,197 |

At December 31, 2009, deferred income includes €2,444 million (€2,317 million at December 31, 2008) of partner advances to EDF under the nuclear plant financing plans, and €2,513 million of connection fees for ERDF and EDF (€2,529 million at December 31, 2008). The increase in the "Other" item essentially relates to the put option granted to minority shareholders in SPE (see note 5.2).

# Note 45 Contribution of joint ventures

The Group holds investments in joint ventures (see note 49). As stated in note 3.3, these investments are proportionally consolidated.

The joint ventures' contributions to the consolidated balance sheet and income statement are as follows:

**– At December 31, 2009**

| *(in millions of Euros)* | % owned | Current Assets | Non Current Assets | Current liabilities | Non current liabilities | Sales | Operating profit before depreciation and amortization |
|---|---|---|---|---|---|---|---|
| EnBW | 46.07% | 4,145 | 13,247 | 3,490 | 9,148 | 7,195 | 1,193 |
| Edison | 48.96% | 1,673 | 6,942 | 1,624 | 2,515 | 4,389 | 713 |
| CENG | 49.99% | 404 | 4,861 | 627 | 1,084 | 80 | 34 |
| Other | | 2,260 | 6,282 | 1,904 | 1,346 | 2,693 | 387 |
| **TOTAL** | | **8,482** | **31,332** | **7,645** | **14,093** | **14,357** | **2,327** |

**– At December 31, 2008**

| *(in millions of Euros)* | % owned | Current Assets | Non Current Assets | Current liabilities | Non current liabilities | Sales* | Operating profit before depreciation and amortization |
|---|---|---|---|---|---|---|---|
| EnBW | 46.07% | 5,289 | 11,260 | 4,214 | 7,903 | 7,467 | 1,114 |
| Edison* | 48.96% | 1,604 | 6,434 | 1,725 | 1,949 | 5,003 | 807 |
| Other | | 2,879 | 5,640 | 2,443 | 1,022 | 2,665 | 341 |
| **TOTAL** | | **9,772** | **23,334** | **8,382** | **10,874** | **15,135** | **2,262** |

** Edison trading revenues for 2008 are presented net of purchases.*

"Other" mainly concerns Dalkia and *EDF Investissement Groupe*.

# Note 46 Related parties



Details of transactions with related parties are as follows:

| | Proportionally consolidated companies | | Companies accounted for under the equity method | | French State and state-owned entities | | Group Total | |
|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | **12.31.2009** | 12.31.2008 | **12.31.2009** | 12.31.2008 | **12.31.2009** | 12.31.2008 | **12.31.2009** | 12.31.2008 |
| Sales | **171** | 160 | **310** | 64 | **1,211** | 579 | **1,692** | 803 |
| Fuel and energy purchases | **119** | 131 | **829** | 560 | **1,942** | 3,739 | **2,890** | 4,430 |
| Other external purchases | **-** | - | **-** | - | **838** | 575 | **838** | 575 |
| Financial assets | **122** | 125 | **-** | - | **183** | 633 | **305** | 758 |
| Other assets | **140** | 126 | **312** | 15 | **382** | 985 | **834** | 1,126 |
| Financial liabilities | **149** | 1,083 | **-** | - | **-** | - | **149** | 1,083 |
| Other liabilities | **327** | 286 | **41** | 31 | **2,389** | 2,554 | **2,757** | 2,871 |

## 46.1 Transactions with entities included in the scope of consolidation

EDF has entered into various commercial contracts with its subsidiaries and affiliates. EDF and EnBW, in particular, entered into an agreement in 2001 defining the methods of cooperation between the two companies.

Transactions with joint ventures and associates concern sales and purchases of energy.

## 46.2 Relations with the French State and State-owned entities

### 46.2.1 Relations with the French State

The French State holds 84.5% of the capital of EDF at December 31, 2009, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, EDF is subject to certain inspection procedures, in particular economic and financial inspections by the State, audits by the French Court of Auditors (*Cour des Comptes*) or Parliament, and verifications by the French General Finance Inspectorate (*Inspection Générale des Finances*).

Under an agreement entered into by the French State and the EDF group on July 27, 2001 concerning the monitoring of external investments, procedures exist for prior approval by the French State or notification (advance or otherwise) of the State in respect of certain planned investments,

additional investments or disposals by the Group. This agreement also introduced a procedure for monitoring the results of external growth operations.

The Public service contract between the French State and EDF was signed on October 24, 2005. This contract is intended to form the framework for public service missions entrusted by the lawmaker to EDF for an unlimited period, since the law of August 9, 2004 simply requires a report every three years without stipulating the duration of the contract. The first three-year report was remitted to the French Government during 2008.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the minister in charge of energy, which sets objectives for the allocation of generation capacity.

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorization to build and operate generation facilities, and establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and the level of the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* or CSPE).

### 46.2.2 Relations with GDF SUEZ

Since the distribution network management businesses were transferred to subsidiaries – ERDF SA, a subsidiary of EDF, has managed electricity distribution since January 1, 2007 and GRDF SA, a subsidiary of GDF SUEZ, has managed gas distribution since January 1, 2008 – the agreement defining relations between ERDF SA and GRDF SA in respect of the common operator has replaced the previous agreement between EDF and GDF SUEZ.

The common network operator manages the local public service for energy distribution, covering network construction, operation and maintenance, and metering.

EDF and GDF SUEZ also have two other common services governed by contracts:
- the Health and Safety Delegation;
- the Information Technology and Telecommunications Division (DIT), which is responsible for certain information systems.

The GDF SUEZ group has just been named as a partner of EDF in construction of France's second EPR at Penly.

### 46.2.3 Relations with public sector entities

The Group enters into normal business transactions with public sector entities, mainly for electricity supplies and invoicing for access to the transmission network.

Transactions with AREVA concern uranium purchases, uranium enrichment, nuclear fuel purchases, plant maintenance operations and equipment purchases, and transportation, storage, processing and recycling services for spent fuel.

On December 19, 2008 EDF and AREVA signed a framework agreement for spent fuel management contracts concerning periods after 2007.

The Group also holds shares in AREVA, as stated in note 27.3.2.3.

## 46.3 Management compensation

The Group's key management personnel are the Chairman of the Board of Directors, the Chief Officers until November 25, 2009, and the external members of the Board of Directors.

The total compensation paid by EDF and controlled companies to the Group's key management personnel amounted to €4.5 million for 2009 (€4.8 million in 2008) and covered short-term benefits (salaries, the variable portion paid in 2009, profit share and benefits in kind) and the corresponding employer contributions until November 25, 2009, plus director's fees over the entire year.

Management personnel who belong to the IEG regime also benefit from employee benefits (as defined by IAS 19) attached to that status. The past service cost related to these benefits for 2009 is €0.2 million (€0.3 million for 2008). Other than the benefits reported above, key management personnel benefit from no other special pension system, starting bonus or severance payment entitlement.

They benefited from the free share plan ACT 2007 in the same way as other EDF group employees. Given the terms of attribution and the employee offering, the shares concerned by ACT 2007 have been delivered in 2009.

# Note 47 Environment



## 47.1 Greenhouse gas emission rights

In application of the Kyoto protocol, the EU directive aiming to reduce greenhouse gas emission levels by attributing emission rights came into effect in 2005, for an initial three-year period which ended on December 31, 2007 and was marked by a reduction in the volumes of rights allocated.
The second allocation period runs from 2008 to 2012.

In the EDF group, the companies subject to this directive are EDF, EnBW, EDF Energy, British Energy, Edison, Fenice, Dalkia International and Dalkia Investissement, Bert, Demasz, Kogeneracia, Zielonagora, EC Krakow, Ersa, EC Wybrzeze, SPE and EDF Énergies Nouvelles.

In 2009, the Group surrendered 94 million tonnes in respect of emissions generated in 2008. In 2008, the Group surrendered 91 million tonnes in respect of emissions generated in 2007.

The Group's total quota allocation for 2009 recorded in the national registers is 75 million tonnes (67 million tonnes for 2008).

The volume of emissions at December 31, 2009 stood at 83 million tonnes (84 million tonnes at December 31, 2008). The provision resulting from over-quota emissions amounts to €372 million and covers the shortfall in rights at the end of 2009 (€397 million at December 31, 2008).

As part of the Clean Development Mechanism defined in the Kyoto protocol, the Group set up a Carbon Fund in late 2006, with the aim of supporting projects to reduce greenhouse gas emissions in emerging countries, and benefiting from carbon emission permits. This fund involves EDF and all the European entities, and is managed by EDF Trading.

CER credit purchases through the Carbon Fund amount to €178 million at December 31, 2009 (€176 million at December 31, 2008).

## 47.2 Energy savings certificates

In all its subsidiaries, the Group is engaged in a process to control energy consumption through various measures developed by national legislations, in application of European Union directives.

The French law of July 13, 2005 introduced a system of energy savings certificates. Companies selling electricity, gas, heat or cold to end-users with sales above a certain level are subject to energy savings obligations for a three-year period running till June 30, 2009. They fulfill these obligations by making direct or indirect energy savings rewarded by certificates, or by purchasing energy savings certificates. At the end of the three years, the entities concerned must provide evidence of compliance with obligations by surrendering the certificates, or pay a fine to the Treasury.

For EDF, the obligation is to save 30 TWh over the first three-year period. By the end of the first period on June 30, 2009, EDF had taken action to obtain their energy savings certificates by the end of the period, and certificates for an amount of 34 TWh had been awarded at that date (23 TWh at December 31, 2008).
The French state has not yet published the volume of energy savings to be achieved for the second period.

## 47.3 Renewable energy certificates

In the United Kingdom, Poland and Italy, certificates are awarded when electricity is generated from renewable energy sources, to encourage greater use of renewable energies through a compensation system for generation costs and an obligation for energy suppliers to sell a certain quantity of renewable energy. In practice, the generator or supplier must provide proof that the obligation has been fulfilled or surrender the renewable energy certificates gained and/or purchased. Similar systems have been introduced for cogeneration.

In 2009, Italy and the United Kingdom reported a deficit in their renewable energy balance. A provision of €216 million was booked.

# Note 48 Subsequent events



## 48.1 EDF

On January 26, 2010, EDF issued a $2,250 million bond for institutional investors on the US market. This bond is governed by Rule 144A of the US Securities and Exchange Commission (SEC), and comprises two tranches:

- one 10-year installment of $1,400 million, coupon 4.60%;
- one 30-year installment of $850 million, coupon 5.60%.

## 48.2 EnBW

After obtaining authorization from the German anti-cartel authorities to sell GESO, EnBW announced its decision to select Technischen Werke Dresden (TWD) as the buyer. The rest of the negotiations will now take place exclusively with TWD, with the objective of concluding a sale agreement.

EnBW and TWD have agreed not to disclose detailed information on these negotiations.

# Note 49 Scope of consolidation

The scope of consolidation at December 31, 2009 is as follows:

| Company | | Head office | % owned | % voting rights | Consolidation method | Business sector |
|---|---|---|---|---|---|---|
| **FRANCE** | | | | | | |
| Électricité de France | (1) | | 100 | 100 | Parent company | G,D,S |
| RTE EDF Transport | (1) | | 100 | 100 | FC | T |
| Électricité Réseau Distribution France (ERDF) | (1) | | 100 | 100 | FC | D |
| PEI Group | (1) | | 100 | 100 | FC | G |
| **UNITED KINGDOM** | | | | | | |
| EDF Energy | (2) | | 100 | 100 | FC | G,D,S |
| EDF Energy UK Ltd. | | | 100 | 100 | FC | S |
| EDF Development Company Ltd. | | | 100 | 100 | FC | G |
| **GERMANY** | | | | | | |
| EnBW | (2) | | 46.07 | 46.07 | PC | G,D,S,T |
| **ITALY** | | | | | | |
| Edison | (2) | | 48.96 | 50 | PC | G,D,S |
| Transalpina di Energia (TdE) | | | 50 | 50 | PC | S |
| MNTC | | | 100 | 100 | FC | S |
| Wagram 4 | | | 100 | 100 | FC | S |
| Fenice | (2) | | 100 | 100 | FC | G |
| **OTHER INTERNATIONAL** | | | | | | |
| EDF International | (1) | France | 100 | 100 | FC | S |
| Société d'Investissement en Autriche | | France | 100 | 100 | FC | S |
| Estag | (2) | Austria | 25 | 25 | PC | G,S |
| EDF Belgium | | Belgium | 100 | 100 | FC | G |
| Segebel | | Belgium | 100 | 100 | FC | S |
| SPE | | Belgium | 51 | 51 | FC | G |
| Ute Norte Fluminense | | Brazil | 90 | 90 | FC | G |
| Ute Paracambi | | Brazil | 100 | 100 | FC | G |
| Figlec | | China | 100 | 100 | FC | G |
| Shandong Zhonghua Power Company | | China | 19.60 | 19.60 | EM | G |
| San Men Xia | | China | 35 | 35 | EM | G |
| Taishan Nuclear Power JV Co | | China | 30 | 30 | EM | G |
| Azito Énergie | | Ivory Coast | 32.85 | 32.85 | PC | G |
| EDF Inc | | USA | 100 | 100 | FC | S |
| Unistar Nuclear Energy Inc | | USA | 50 | 50 | PC | G |
| Constellation Energy Nuclear Group (CENG) | | USA | 49.99 | 49.99 | PC | G |
| Bert | | Hungary | 95.57 | 95.57 | FC | G |
| Demasz | (2) | Hungary | 100 | 100 | FC | D |
| Nam Theun Power Company | | Laos | 35 | 35 | EM | G |

| Company | | Head office | % owned | % voting rights | Consolidation method | Business sector |
|---|---|---|---|---|---|---|
| Cinergy Holding Company BV | | Netherlands | 50 | 50 | PC | G |
| Finelex BV | | Netherlands | 100 | 100 | FC | G |
| SLOE Centrale Holding BV | | Netherlands | 50 | 50 | PC | G |
| EC Krakow | | Poland | 94.31 | 94.31 | FC | G |
| EC Wybrzeze | | Poland | 99.73 | 99.73 | FC | G |
| EDF Polska | | Poland | 100 | 100 | FC | S |
| ERSA (Rybnik) | | Poland | 79.76 | 97.31 | FC | G |
| Kogeneracja | | Poland | 40.58 | 50 | FC | G |
| Zielona gora | | Poland | 39.93 | 98.40 | FC | G,D |
| SSE | | Slovakia | 49 | 49 | PC | D |
| EDF Alpes Investissements | | Switzerland | 100 | 100 | FC | S |
| ALPIQ Group | | Switzerland | 26.06 | 26.06 | EM | G,D,S,T |
| Meco | | Vietnam | 56.25 | 56.25 | FC | G |
| **OTHER ACTIVITIES** | | | | | | |
| EDF Investissement Groupe | | Belgium | 93.01 | 50 | PC | S |
| Dalkia Holding | | France | 34 | 34 | EM | S |
| Edenkia | | France | 50 | 50 | EM | S |
| Dalkia International | | France | 50 | 24.14 | PC | S |
| Dalkia Investissement | | France | 67 | 50 | PC | S |
| Richemont | (1) | France | 100 | 100 | FC | G |
| EDF Développement Environnement SA | (1) | France | 100 | 100 | FC | S |
| Société pour le Conditionnement des Déchets et Effluents Industriels (SOCODEI) | | France | 51 | 51 | FC | S |
| Cofiva | (1) | France | 100 | 100 | FC | S |
| Sofinel | | France | 55 | 54.98 | FC | S |
| Électricité de Strasbourg | | France | 89.07 | 89.07 | FC | D |
| Tiru SA – Traitement Industriel des Résidus Urbains | (2) | France | 51 | 51 | FC | S |
| Dunkerque LNG | | France | 100 | 100 | FC | S |
| EDF Énergies Nouvelles (EDF EN) | (2) | France | 50 | 50 | FC | G,S |
| Immobilière Wagram Étoile | (1) | France | 100 | 100 | FC | S |
| La Gérance Générale Foncière | (1) | France | 99.86 | 99.86 | FC | S |
| Immobilière PB6 | | France | 50 | 50 | PC | S |
| Société Foncière Immobilière et de Location (SOFILO) | (1) | France | 100 | 100 | FC | S |
| EDF Optimal Solutions | | France | 100 | 100 | FC | S |
| Société C2 | (1) | France | 100 | 100 | FC | S |
| Société C3 | (1) | France | 100 | 100 | FC | S |
| EDF Holding SAS | (1) | France | 100 | 100 | FC | S |
| Domofinance | | France | 45 | 45 | EM | S |
| Fahrenheit | | France | 100 | 100 | FC | S |
| Wagram Insurance Company | | Ireland | 100 | 100 | FC | S |
| Océane Ré | | Luxembourg | 99.98 | 99.98 | FC | S |
| EDF Trading | (2) | United Kingdom | 100 | 100 | FC | S |
| EDF Production UK Ltd. | | United Kingdom | 100 | 100 | FC | G |

*Consolidation methods: FC = full consolidation, PC = proportional consolidation, EM = accounted for under the equity method.*

*Business segments: G = Generation, D = Distribution, S = Services, T = Transmission.*

*(1) Companies fiscally consolidated by EDF under the option initially registered on January 1, 1988.*

*(2) Group.*

# 20.2 Statutory Auditors' Report on the Consolidated Financial Statements

*This is a free translation into English of the statutory auditors' report on the consolidated financial statements issued in French and is provided solely for the convenience of English speaking readers.*

*This statutory auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the auditor's assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions, or disclosures.*

*The report also includes information relating to the specific verification of information given in the Group's management report.*

*This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.*

## YEAR ENDED DECEMBER 31, 2009

To the Shareholders,

Following our appointment as statutory auditors by your Annual General Meeting, we hereby report to you, for the year ended December 31, 2009 on:
- the audit of the accompanying consolidated financial statements of Électricité de France SA;
- the justification of our assessments;
- the specific verification required by law.

The consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

### 1. OPINION ON THE CONSOLIDATED FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting policies used and significant accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities, and of the financial position of the Group as of December 31, 2009 and of the results of its operations for the year then ended in accordance with IFRS as adopted by the European Union.

Without qualifying our opinion, we draw your attention to the following matters set out in the notes to the consolidated financial statements:

- the valuation of long-term provisions relating to nuclear electricity production, as described in notes 3.22 and 35 to the consolidated financial statements, results as indicated in note 3.2.1 from management's best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning;
- the approach adopted by EDF to present in the balance sheet its obligation to renew property, plant and equipment used for the French public distribution of electricity, as described in note 3.24, is based on the specific characteristics of concession contracts. The amount of contractual obligations as calculated and disclosed annually to the grantors described in activity reports is used for evaluating the obligation. An alternative approach based on the discounted value of future payments necessary for replacement of these assets at the end of their industrial useful life would result in a different representation of the obligation towards grantors. The impacts this approach would have had on the accounts are shown in note 3.24 for information purposes. Measurement of the concession liability concerning assets to be replaced is notably subject to uncertainty in terms of costs and disbursement dates;
- the changes in accounting principles described in notes 1.2, 2 and 8.

## 2. JUSTIFICATION OF ASSESSMENTS

In accordance with the requirements of article L. 823-9 of the French Commercial Code ("*Code de commerce*") relating to the justification of our assessments, we bring to your attention the following matters:

### ACCOUNTING POLICIES

As part of our assessment of the Group accounting principles and methods, we have verified the appropriateness of the disclosures presented in notes 3.4, 3.10.2, 3.12 and 3.24 with respect to the accounting treatments of commitments to purchase minority interests in a fully consolidated company, to greenhouse gas emission quotas and to concessions, areas which are not mandatory or specifically addressed in IFRS as adopted in the European Union as of December 31, 2009.

### MANAGEMENT JUDGMENTS AND ESTIMATES

Note 3.2 to the consolidated financial statements describes the main sensitive accounting policies for which management is required to make estimates and exercise judgment. Our procedures consisted, in the context of the difficulty to determine the future economic outlook, in assessing these estimates, the data and assumptions on which they are based, reviewing, on a test basis, the calculations performed by the Company, comparing accounting estimates of prior periods with corresponding actual amounts, reviewing the procedures for approving these estimates by management and finally verifying that the notes to the consolidated financial statements provide appropriate disclosures with respect to the assumptions adopted by the Group.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole and contributed to the opinion we formed which is expressed in the first part of this report.

## 3. SPECIFIC VERIFICATION

As required by law we have also verified, in accordance with professional standards applicable in France, the information relating to the Group, given in the management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Paris-La Défense and Neuilly-sur-Seine, February 10, 2010

The statutory auditors

| **KPMG Audit**<br>***Department of KPMG S.A.*** | | **Deloitte & Associés** | |
|---|---|---|---|
| Jean-Luc Decornoy | Michel Piette | Alain Pons | Tristan Guerlain |

# 20.3 Fees paid by the Group to statutory auditors

The following table sets forth the fees related to the 2009 financial year for EDF and its fully consolidated subsidiaries for services by its statutory auditors and their respective affiliates:

| | Deloitte | | KPMG | |
|---|---|---|---|---|
| **(In thousands of Euros)** | Amount (taxes excluded) | % | Amount (taxes excluded) | % |
| **Audit:** | | | | |
| Statutory audit, certification, review of company and consolidated accounts | | | | |
| • Issuer | 3,428 | 25.8 | 3,534 | 40.3 |
| • Fully consolidated subsidiaries | 5,755 | 43.3 | 4,096 | 46.7 |
| Other tasks and services directly connected to the statutory auditor's mission | | | | |
| • Issuer | 1,157 | 8.7 | 995 | 11.4 |
| • Fully integrated subsidiaries | 1,543 | 11.6 | 9 | 0.1 |
| **SUB-TOTAL** | **11,883** | **89.4** | **8,634** | **98.5** |
| **Other services provided by the auditors' networks to fully integrated subsidiaries:** | | | | |
| Legal, tax, social | 895 | 6.7 | 99 | 1.1 |
| Other (specify if >10% of auditor's fees) | 525 | 3.9 | 37 | 0.4 |
| **SUB-TOTAL** | **1,420** | **10.6** | **136** | **1.5** |
| **TOTAL** | **13,303** | **100** | **8,770** | **100** |

All of EDF's statutory auditors were renewed for 6 years from the 2005 financial year.
The fees were approved for each auditor after the process of necessary discussions and deliberations.
In 2009, KPMG network's fees include the auditor's mission services carried out in relation with acquisition of entities.

**RECALL INFORMATION GIVEN FOR THE 2008 FINANCIAL YEAR:**

| | Deloitte | | KPMG | |
|---|---|---|---|---|
| **(In thousands of Euros)** | Amount (taxes excluded) | % | Amount (taxes excluded) | % |
| **Audit:** | | | | |
| Statutory audit, certification, review of company and consolidated accounts | | | | |
| • Issuer | 3,494 | 33.8 | 3,257 | 32.8 |
| • Fully consolidated subsidiaries | 4,537 | 44.0 | 3,937 | 39.6 |
| Other tasks and services directly connected to the statutory auditor's mission | | | | |
| • Issuer | 706 | 6.8 | 2,707 | 27.2 |
| • Fully integrated subsidiaries | 973 | 9.4 | 26 | 0.3 |
| **SUB-TOTAL** | **9,710** | **94.0** | **9,927** | **99.9** |
| **Other services provided by the auditors' networks to fully integrated subsidiaries:** | | | | |
| Legal, tax, social | 324 | 3.2 | 4 | 0.0 |
| Other (specify if >10% of auditor's fees) | 291 | 2.8 | 6 | 0.1 |
| **SUB-TOTAL** | **615** | **6.0** | **10** | **0.1** |
| **TOTAL** | **10,325** | **100** | **9,937** | **100** |

In 2008, KPMG network's fees include the auditor's mission services carried out in relation with acquisition of entities.

# 20.4 Dividend policy

## 20.4.1 Dividends and interim dividends paid within the last three financial years

The amount of dividends and interim dividends paid within the last three financial years was as follows:

| Financial year | Number of shares | Dividend per share | Total dividends paid in Euros (after deduction of treasury shares) | Dividend Payment date |
|---|---|---|---|---|
| 2006 | 1,822,171,090 | €1.16 | 2,113,624,504.40 | 4 June 2007 |
| 2007 | 1,822,171,090 | €1.28 | 2,330,266,755.20[1] | 2 June 2008 |
| 2008 | 1,822,171,090 | €1.28 | 2,328,200,485.12[2] | 3 June 2009 |

*1. €1,056,809,460.08 of which paid on November 30, 2007 as an interim dividend.*
*2. €1,164,067,897.60 of which paid on December 17, 2008 as an interim dividend.*

Furthermore, on November 5, 2009, the Board of Directors decided, upon authorization of the Sareholders' Meeting, for the 2009 fiscal year, to pay an interim dividend of €0.55 per share, in the form of cash or new shares with an issue price of €35.13. (see section 20.4.2 ("Dividend distribution policy")).

The payment of the dividends in shares on December 17, 2009 resulted in a share capital's increase of €13,347,786.00, following the issuance of 26,695,572 shares. The total amount of the interim dividend (excluding repurchased shares) is €1,002,006,770.05.

## 20.4.2 Dividend distribution policy

The dividend distribution policy of EDF, determined by its Board of Directors, will take into account its investment needs, the economic context and all other factors considered to be relevant.

On November 5, 2009, upon authorization of the Sareholders' Meeting, the Board of Directors decided the payment of an interim dividend for the current financial year of €0.55 per share, for a total of €1 billion. It has been proposed to shareholders to choose for the payment of their interim dividend either in cash or in new shares. More than 302,000 shareholders, including the French State and employee shareholding through mutual funds *(Fonds Commun de Placement Entreprise, "FCPE")*, have chosen this method of payment, representing 93.6% of the rights exercised. In total, at the end of the year 2009, 26,695,572 new shares were issued at €35.13, representing 1.47% of of the capital. This led to a strengthening of the Group capital of €937,815,444.

At its meeting of February 10, 2010, the Board of Directors decided to propose to the Shareholders' Meeting the distribution of a dividend amounting to €1.15 per share under the year 2009. Given the interim dividend of €0.55 per share paid on December 2009, a balance of €0.60 per share should be paid on June 2010 if this proposal is approved by the Shareholders' Meeting.

## 20.4.3 Prescription

Dividends that are not claimed within five years of the declared date of payment become time barred and are paid to the French State.

# 20.5 Legal and arbitration proceedings

In its everyday business, the Group is involved in a certain number of legal, arbitration and administrative proceedings.

The costs and expenses that may result from these proceedings are only provisioned if they are probable and if their amount can be quantified, or assessed within a reasonable range, in which case, the amount provisioned is determined on a case by case basis, based on the best possible estimate. The provisions made are based on an appraisal of the level of risk on a case by case basis and do not depend principally on the progress of the proceedings. However, events that occur during the proceedings may nonetheless lead to a reassessment of the risk.

Other than the proceedings described below, as well as the proceedings and/or investigations set forth in chapter 6 of the present *Document de Référence*, to the knowledge of the Company there is no other legal governmental or arbitration proceeding (including those pending or threatened), which has had in the last 12 months or may have material effects on the Company and/or the Group's financial condition or profits.

## 20.5.1 Legal proceedings concerning EDF

### FRENCH STATE AID

Through a letter dated October 16, 2002, the European Commission initiated proceedings against France, claiming that State aid had been granted to EDF when its balance sheet was restructured on January 1, 1997. By a decision dated December 16, 2003, the European Commission set the amount of aid to be repaid at €889 million (principal). On February 11, 2004, the French State issued a collection note for €1,224 million, comprised of the principal amount of the aid to be repaid, plus interest. This amount was paid by EDF. On April 27, 2004, EDF filed an appeal with the European Court of First Instance to have the decision of the European Commission reversed and the French State filed, on November 14, 2004, a brief in support of EDF's appeal. Following a hearing which took place on November 25, 2008, the European Court of First Instance ruled on December 15, 2009, setting aside the European Commission decision of December 16, 2003. The court's ruling is not suspensive and the State repaid the sum of €1,224 million to EDF on December 30, 2009. The European Commission appealed to the Court of Justice of the European Union against the decision of the Court.

### ASBESTOS

EDF has used products containing asbestos in the past. As such, certain employees, namely some working on fossil-fired power plant maintenance, may have been exposed before replacement or protection measures were implemented starting at the end of the 1970's.

In France, EDF was the subject of 531 proceedings, between 1997 and the end of December 2009, which alleged gross negligence in connection with the asbestos exposure of its employees in their working environment. If gross negligence is found, it may lead to the payment of additional compensation by the employer to victims or their assignees.

Since June 2004, EDF has decided not to appeal, in cases filed by agents, the rulings made by Social Security Case Panels *(Tribunaux des Affaires de Sécurité Sociales,* "TASS") which recognized the employer's gross negligence (EGN).

As of the end of 2009, the total amount of EDF's cumulated final condemnations in judicial actions recognizing EGN attained approximately 19.8 million.

As of December 31, 2009, an amount of €30 million is provisioned in EDF's financial statements with respect to the legal proceedings relating to the compensation of victims of asbestos.

### KALIBRAXE

On January 22, 2007 KalibraXE submitted a complaint concerning alleged anti-competition practices committed by EDF to the Competition Council. The application for a remedy was accompanied by a request for conservatory measures.

On the merits, KalibraXE maintained that the practices of EDF had notably, as their purpose and effect, "*purely and simply to eliminate KalibraXE and, more generally, any new competitor on the market*" and "*prevent final consumers from freely choosing a supplier or buying from several suppliers*".

Considering, in addition, that, on the one hand, these practices denied KalibraXE "*not only the opportunity to enter into new contracts but also to continue its contractual relations with existing customers since it could not generate a profit on its investments*" and, on the other hand, constituted an attack on the interests of consumers, the industry and the wider economy, KalibraXE requested conservatory measures, in particular the suspension of exclusivity clauses in EDF contracts.

On April 25, 2007 the Competition Council considered the case was admissible on its merits but rejected the conservatory measures sought by KalibraXE.

Nonetheless, as a conservatory measure, the Council did instruct EDF to modify its general conditions of sale and inform those customers who had exercised their rights of eligibility that no penalty would be incurred on the normal expiry date of their supply contracts, and to submit to the Council a copy of the amended general conditions of sale. KalibraXE appealed this decision; on June 26, 2007 the Court of Appeal of Paris rejected the appeal.

The inquiry of the Competition Authority *("Autorité de la Concurrence")* (which replaced the Competition Council in accordance with order n°2008-1161 of November 13, 2008) is in progress.

### SOLAIRE DIRECT

On May 19, 2008, Solaire Direct filed a complaint and an application for protective measures with France's Competition Council *(Conseil de la Concurrence)*, alleging that "the EDF group" had made improper use of its dominant position on the various electricity markets to penetrate the emerging global services market for shared photovoltaic electricity generation via its subsidiary EDF Énergies Nouvelles Réparties ("EDF ENR"), thereby hindering the arrival and development of new entrants on that market.

The Council met on November 26, 2008 to examine whether the substance of the complaint and the application for protective measures were admissible. EDF proposed commitments to address concerns over competition expressed by the Council. These commitments were posted on the Council's website as part of the "market test" procedure in order to allow the firms concerned to state their opinion.

During its session of February 24, 2009, the Competition Council decided to dismiss the commitments proposal, pass protective measures relating to the methods of marketing of global photovoltaic energy services by EDF Énergies Nouvelles Réparties, and issue a ruling concerning the submission of Solaire Direct. At the present stage of the investigation, the Competition Authority considers that the communication methods used by EDF create a confusion between, on the one hand, EDF's role as electricity supplier subject to the regulated tariffs, and on the other hand, the competitive activities of its subsidiary.

In its decision 09-MC-01 of April 8, 2009 the Competition Authority (which replaced the Competition Council in accordance with the order n°2008-1161 of November 13, 2008) instructs EDF to:

- remove from all communication supports of the *Bleu Ciel* d'EDF brand (Bleu ciel letter, EDF's electricity supply invoice, publicity, etc.) any reference to EDF ENR's activities on the solar photovoltaic line of business;
- prevent any agents reachable on the 3929 number from making any reference to the services offered by EDF ENR;
- terminate any communication to EDF ENR of any information obtained through the 3929 number. This order concerns not only any appointments but also any transfer of information on people interested by the generation of photovoltaic energy;
- refrain from providing EDF ENR with information to which EDF has access due to its activities as an electricity supplier subject to the regulated tariffs.

EDF had to comply with these requirements at the latest May 14, 2009, which has been done.

If the Competition Authority concluded at the end of the investigation (which is expected to last 12 to 18 months) that EDF was using anti-competitive practices, it could notably impose a financial penalty in application of the provisions of article L. 464-2 of the French Commercial Code. Such potential penalty must be proportional to the gravity of the charges, the scale of the prejudice caused to the economy and the company's position, with a maximum potential amount equal to 10% of the worldwide sales (excluding taxes) of the company concerned.

### EPR

In relation to EPR's development works, several actions were initiated by different associations before the Caen Administrative Court:

- a motion for summary judgment (*recours en référé*) suspending works in progress, filed on October 11, 2006 against the building permit. The hearing took place in front of the Caen Administrative Court on October 24, 2006 and the motion was rejected on October 26, 2006 for lack of emergency;
- two actions for cancellation filed on August 23, 2006 and October 11, 2006 against the building permit granted by the *Préfet* and two actions for cancellation filed on September 11, 2006 against the public seaborne domain works permit and the permit concerning other facilities and works, granted by the *Préfet*. These various actions were rejected by the Caen Administrative Court on March 15, 2007.

Appeals for annulment of the decree authorizing creation were submitted by three associations to the French Council of State on June 5, 2007. In its ruling issued April 23, 2009, the French Council of State rejected the appeals for annulment of the decree.

### LABOR LITIGATIONS

EDF is party to a number of labor lawsuits with employees regarding the calculation and implementation of rest periods. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and its financial situation. However, because they are likely to involve a large number of EDF's employees in France, these lawsuits could present a systemic risk which may have a material negative effect on the Group's financial results.

The Group is also a party to other litigations with social bodies. The main one is between EDF and the "URSSAF" in Toulouse relating to the inclusion of certain bonuses, indemnifications and other benefits in kind in the tax base. As of December 31, 2009, an amount of €223 million was provisioned in EDF's consolidated financial statements with respect to litigation with social authorities.

### ENVIRONMENTAL LAWSUITS

Due to its industrial business, the Group is party to various environmental lawsuits, in particular, regarding ground decontamination. As of the date of the filing of this *Document de Référence*, the Group believes that none of these lawsuits, individually, is likely, in the event of an unfavorable outcome, to have a material, negative effect on the Group's financial results.

### TAX LITIGATION

During 2008 and 2009, EDF SA was the subject of an audit accounting regarding 2004, 2005 and 2006 financial years. At the end of 2009, a proposal of correction was sent to EDF SA regarding the period audited. EDF challenges the major part of the proposed correction notified.

### INITIATION OF PROCEEDINGS BY THE EUROPEAN COMMISSION AGAINST THE EDF GROUP CONCERNING LONG-TERM ELECTRICITY SUPPLY CONTRACTS

On December 23, 2008, EDF and Électricité de Strasbourg received a statement of objections from the European Commission's Directorate General for competition, relating to the long-term electricity supply contracts concluded in France with large industrial electricity consumers.

The Commission is concerned that "*these contracts may prevent customers from switching to other providers, thereby reducing competition on the market, in particular when considering the exclusive nature and duration of the contracts and the share of the market that is tied by them. Under the same contracts, the resale of electricity appears to be restricted. These practices may constitute infringements of the EC Treaty rules on abuse of dominant market positions (Article 82). In particular, these practices may have made it difficult for suppliers to enter and expand in the French electricity markets and may have rendered the wholesale market for electricity less liquid*".

In December 2008, EDF submitted proposed commitments to address the European Commission's concerns over competition. Among other undertakings, it promised that an average 65% of the volumes of electricity supplied to large industrial customers in France would be put on the market every year.

The Commission adopted on March 17, 2010 a decision making the actual commitments effective for 10 years and thus ending the ongoing litigation.

### ALCAN SAINT-JEAN-DE-MAURIENNE

On December 31, 1985, EDF, Pechiney (now Alcan France) and Aluminium Péchiney signed an energy supply contract (2 TWh) intended primarily to supply the Péchiney primary aluminum plant at Saint Jean de Maurienne, according to the terms of which EDF undertook to supply quantities of electricity for a fixed price. The duration of the contract was modified by additional clauses; it expires on December 31, 2012 for the Saint-Jean-de-Maurienne plant.

Following various letters from Alcan France requesting an extension of the contract, on August 2, 2007, Alcan France and Aluminium Péchiney served a writ on EDF to appear before the Paris Commercial Court on September 21, 2007, for a preliminary hearing of the proceedings.

After several reports, the court hearing was scheduled for October 26, 2009. In its ruling issued on January 18, 2010, the Commercial Court rejected all of Alcan's claims.

### REE

In the early 1990s, EDF and Red Electrica de Espana (REE) entered into a baseload contract for supply by EDF to REE of energy output at the interconnection point between the French and Spanish electricity networks, and a peakload contract providing for temporary suspension of deliveries. From their inception until the end of 2005, these contracts benefited from priority access to the interconnection. In a decision of June 7, 2005, the Court of Justice of the European Communities declared this priority access contrary to European law.

The Commission ordered the national regulators to cancel the priority rights of access to the interconnection and introduce an auction system for acquisition of those rights, and the French regulator CRE complied with this injunction through a decision of December 1, 2005.

EDF and REE then had to agree terms for drawing energy and acquiring the rights of access to the interconnection so that REE could import electricity into Spain, reached an agreement in June 2006 but were unable to reach an agreement for the early months of 2006.

REE originated international arbitration proceedings against EDF and EDF Trading, notified by the ICC (International Chamber of Commerce) on June 13, 2007, for compensation for the alleged damages. EDF also claimed it had suffered damages caused by REE during that time. The dispute is limited to deliveries during the period January – May 2006.

The deed of mission for the Court of Arbitration was signed on January 19, 2008. The Court issued a partial judgment on May 29, 2008, notably clearing EDF Trading from the rest of the proceedings.

On October 12, 2009, the Arbitration Court issued its final ruling, which was subject to a request for rectification, on which the Arbitration Court ruled on February 23, 2010.

The final conclusion of the arbitration is expected in 2010.

### ARCELOR

EDF and Usinor (now Arcelor) entered into an electric energy sale master agreement on November 30, 1999. This master agreement provided that Usinor's sites, when they would become eligible, could replace their "Existing Agreements" by new "Sale Agreements" under the master agreement's conditions. This integration provision has been repeatedly applied when contractual conditions were fulfilled.

Following the Group's restructuring, Arcelor demanded on September 2006 to integrate Mittal Steel Gandrange and the Société Métallurgique de Révigny.

EDF has refused the automatic extension of the master agreement, indicating to Arcelor that the extension could intervene only under price conditions to be defined between the parties. Despite of several meetings, it has been impossible to find an agreement and Arcelor, Mittal Steel Gandrange and the Société Métallurgique de Révigny brought a proceeding against EDF on January 29, 2007 on the substance of the case and without delay before the Commercial Court of Paris.

The Commercial court of Paris pronounced its judgment on July 4, 2007. The latter has:

- ordered EDF to sign a supply agreement under the master agreement's conditions, with Mittal Steel Gandrange and the Société Métallurgique de Révigny, from the effective termination date of the agreements with their supplier;
- ordered EDF to pay damages to the three companies;
- ordered an expert's report to assess the damage sustained by the three companies;
- fixed the provision amount to deposit for this purpose by Arcelor France to €2,500; and
- ordered EDF to pay to each of the three companies, €25,000 pursuant to article 700 of the French Civil procedure Code and ordered the provisional enforcement of the decision.

EDF appealed against this decision. The Appeal Court rejected its appeal on November 5, 2008 and upheld Arcelor's demands, *i.e.*:

- inclusion of Mittal Steel Gandrange and the Société Métallurgique de Révigny in the scope of the master agreement, regardless of the fact that they had previously chosen a different supplier;
- compensation for the prejudice caused by EDF's refusal to extend the master agreement to cover the sites concerned (based on the expert's report requested by the judges in the first instance).

EDF decided not to file an appeal against this ruling by the Paris Appeal Court.

On June 23, 2009, the Paris Commercial Court issued its decision on the value of prejudice defined by the expert. The Court followed the expert's conclusions (except for the rate applied for cash financing) and set the prejudice for the two companies at €9,847,913. EDF paid this amount to ArcelorMittal.

On December 21, 2007 after ArcelorMittal France took over ArcelorMittal Wire France (AMWF), which itself controls ArcelorMittal Manois (AMM), ArcelorMittal France requested extension of its master agreement with EDF to include six new sites belonging to AMWF and AMM. Mediation procedures failed to settle the dispute, and ArcelorMittal France, AMWF and AMM served a summons dated March 5, 2008 on EDF to appear shortly before the Paris Commercial Court, where they are suing for inclusion of the sites concerned in the master agreement of November 30, 1999.

The Paris Commercial Court ruled against EDF on June 29, 2009, and ordered it to:

- pay damages (in an amount to be determined by an expert);
- pay the sum of €25,000 to each company bringing the action, in application of article 700 of the Code of Civil Procedure.

The parties ultimately chose to end the dispute through a settlement dated December 18, 2009 on which they agreed on the amount of prejudice caused to ArcelorMittal.

### GREENPEACE

An investigation is in process at Nanterre Court into "*concealment of invasion of an automated data processing system*" after the statement made by a computer expert from a non-Group agency, who said he had hacked into the computer used by former Greenpeace spokesman Mr Yannick Jadot, at the request of an EDF employee. EDF's application to be associated with the action was refused by the examining magistrate and is currently awaiting a decision by the Court of Appeal. The employee concerned and his superior were formally placed under investigation on March 24 and June 10, 2009 and have been subject to a disciplinary transfer. EDF was placed under investigation on August 26, 2009.

### BUGEY

By decree n°2008-1197 of November 18, 2008, EDF obtained permission to completely dismantle the nuclear facility of Bugey.

On January 21, 2009, an association filed an action for cancellation of the decree before the French Council of State.

The action of the association was notified to EDF on May 6, 2009. The defenses were filed respectively on August 7, 2009 by the French State and on September 3, 2009 by EDF.

### VERDESIS

On June 2008, the company Euro Power Technology has issued a complaint before the French Competition Authority (*Autorité de la Concurrence*), with a request for provisional measures, against EDF and its subsidiary Verdesis, concerning their activities in biogas.

On June 9, 2009, the French Competition Authority (*Autorité de la Concurrence*) has notified its referral to EDF, which has sent preliminary comments on June 23, 2009.

### SARL SECAM

By a decision dated December 10, 1996, upheld by the Court of Appeal of Paris, the Competition Council sentenced EDF for abuse of its dominant market position for having prevented the execution of electricity purchase agreements with independent producers between 1993 and 1995. Following this sentence, the National Association of Independent Producers and Heat Engineers (SNPIET), and approximately twenty producers have introduced an action in payment of damages before the Commercial court of Paris. The parties had signed on July 20, 2007 an agreement that had finally ended the dispute.

On April 4, 2007, EDF received from the SARL SECAM an administrative appeal prior to referral to the administrative judge. The SARL SECAM which was not party to the proceedings before the Competition Council and civil Courts is claiming €79 million.

By letter dated May 29, 2007, EDF rejected the preliminary request of this company. This resulted in the SARL SECAM lodging an action for compensation before the Administrative Court of Paris, which decided that this case should be heard by the Administrative Court of Chalons-en-Champagne. EDF filed a statement of defence during autumn 2007.

### FESSENHEIM

A group of associations petitioned the French Ministers in charge of nuclear safety (the Ministers of Economy and Energy) to order permanent shutdown and dismantling of the nuclear power plant at Fessenheim.

This request was based on article 34 of the "nuclear transparency and safety"[1] law, which allows the enactment of a decree adopted in the Council of State, after consultation with the Nuclear Safety Authority, to order the definitive shutdown and dismantling of a nuclear power plant that presents serious risks, when no other course of action is possible.

The Ministers rejected the petition, following which the associations lodged an appeal before the Strasbourg Administrative court on December 10, 2008.

### EUROPEAN COMMISSION INVESTIGATIONS CONCERNING AN INCREASE IN PRICES ON THE WHOLESALE ELECTRICITY MARKET

In accordance with a decision of February 18, 2009 based on article 20 of EC Regulation n°1/2003, the European Commission carried out in March 2009 surprise inspections at various EDF premises, in the context of investigations relating to the increase in prices on the wholesale electricity market in France.

These inspections follow upon the conclusions of the Commission's inquiry into the energy sector published in January 2007.

They represent a preliminary step in the research concerning suspected anti-competition practices and do not prejudge the final conclusion of actual investigations.

After this investigation, if the Commission were to conclude the existence of antitrust practices by EDF, it could decide to impose in particular a financial penalty, pursuant to Article 23, paragraph 2, a) of Regulation (EC) n° 1/2003. The potential sanctions are proportional to the severity of the charges, the extent of the damage to the economy and the company situation. Their potential maximum amount is 10% of the worldwide sales excluding taxes of the company concerned.

## 20.5.2 Legal proceedings concerning EDF's subsidiaries

### • RTE

#### THE TRANSFER OF HIGH VOLTAGE LINES TO THE SNCF

Pursuant to the French law of December 30, 1982 relating to inland transportation, in accordance with the law n°2004-803 of August 9, 2004, the high voltage lines transferred to the SNCF on January 1, 1983 (as equipment related to the public transmission network), must be transferred for consideration to RTE within one year as from the creation of this company.

The SNCF and RTE (then a service of EDF) have considered a sale of this equipment since 2002 and have worked together in determining the value of this equipment on the basis of objective criteria. However, this valuation process was disrupted due to a dispute concerning the appraisal amount which is still unsolved.

1. Law nº 2006-686 of June 13, 2006.

As a consequence, RTE requested on July 2007 from the Minister for Economy, Finance and Employment on one hand and the MEEDDEM on the other hand, the implementation of an ad hoc commission provided by article 10 of the law 2004-803 dated August 9, 2004 to solve the dispute between the parties.

The members of the Commission were appointed by a decision of the Minister Jean-Louis Borloo dated December 26, 2008 and published on January 18, 2009.

The Commission issued its decision on July 9, 2009, defining the assets to be transferred and fixing their value at €140 million. The SNCF is contesting the decision, and filed an appeal with the French Council of State on August 20, 2009.

### ANNUAL RENT CONTRACT CONCLUDED WITH THE SNCF

RTE pays SNCF an annual rent of €3.1 million per year for the use of the facilities and installations of the high voltage electricity transmission network that was transferred to SNCF by the French law of December 30, 1982. The amount of this rent has been determined by RTE in accordance with the principles used to remunerate its own assets, based on net book value, in the framework of public transmission network tariff. The payment of this rent of €3.1 million follows the termination by RTE in 2001 of the contract entered into with SNCF on December 22, 1999.

By way of an administrative order claim on February 22, 2002, SNCF initiated a procedure against RTE before the Administrative Court *(Tribunal Administratif)* of Paris contesting the new amount of the annual rent paid to SNCF by RTE and claiming the difference with the initial rent.

Following the referral to the Administrative Court of Paris, the investigation which had been closed in a first instance, has been opened again. On August 29, 2008 the court ordered RTE to pay the SNCF the differential from the original rent, plus interest at the legal rate. RTE appealed this decision before the Paris administrative appeal court, also applying for application of the decision to be suspended, which was not an automatic consequence of the appeal.

On November 4, 2008, the SNCF served an order on RTE by bailiff to pay the sum in question within 8 days. The Supervisory Board of RTE decided to pay the SNCF the indemnity of €167,877,170.75 ordered by the court, without withdrawing its application for suspension of application of the Administrative court's decision, or the appeal against that decision.

### CONTRIBUTION TO SYSTEM SERVICES

Poweo, a company contesting the mandatory contribution to system services set forth in article 15 of the law n°2000-108 of February 10, 2000, is asking for remuneration to follow "market rules", and brought the matter before the CoRDIS[1] on July 3, 2009. The CoRDIS ruled in favor of RTE-EDF Transport in a decision notified on October 15, 2009. Poweo has lodged an appeal against this decision before the Paris Appeal Court, and a hearing has been scheduled for May 18, 2010.

### TAX LITIGATION

During 2008 and 2009, RTE was the subject of an audit accounting regarding 2005, 2006 and 2007 financial years. At the second semester of 2009, a proposal of correction was sent to RTE regarding the period audited. RTE challenges the major part of the proposed correction notified.

## • EDEV

EDEV's tax audit carried out in 2005 regarding 2002 and 2003 financial years led to an assessment of €14.5 million in overdue corporate taxes. Since the disagreement with the tax authorities concerning the proposed adjustments persists, an application originating proceedings was submitted to the Paris Administrative Court on April 13, 2007.

## • EDISON

### ACTION INITIATED BY ACEA SPA CONCERNING EDISON'S SHAREHOLDING IN EDIPOWER

On May 2006, ACEA SpA ("ACEA"), Rome's municipal utility, addressed a complaint to the Italian Government and to Italian regulation (AEEG) and competition (AGCM) authorities, alleging that the joint takeover of Edison by EDF and A2A S.A. (formerly AEM S.p.A) had exceeded the upper limit of 30% of the share capital of Edipower held by public corporations (that limit was defined by a decree issued by the Italian Prime Minister, dated November 8, 2000, which defined the rules applicable to the privatization of the companies (called Gencos) then held by Enel SpA ).

On July 7, 2006, the AGCM rendered an opinion *("segnalazione")* supporting ACEA's position and officially requiring from the Italian Government and parliament that measures be taken in order to comply with the provisions of the November 8, 2000 decree.

On August 2006, ACEA initiated an action against EDF, IEB and WGRMH Holding 4 (along with Edison, A2A S.A. (formerly AEM S.p.A), Delmi, Edipower, AEM Turin, Atel and TdE) before the civil court of Rome.

According to ACEA, the fact that the 30% threshold was exceeded constitutes a violation of the applicable laws and could have a negative impact on the competition on the energy market and on consumers' interests.

Therefore, ACEA has required the court to:

- acknowledge EDF and A2A S.A.'s (formerly AEM S.p.A) unfair behavior;
- force EDF and A2A S.A. (formerly AEM S.p.A) to sell their stakes in order to remain within the 30% limit and prohibit them to take and from taking and using energy for the amount above 30%;
- indemnify ACEA's prejudice, the amount of which is still under evaluation and to be determined under a separate proceeding.

ACEA has also indicated that it would require the court to take conservatory measures in order to guarantee its interests while waiting for the court's ruling on the merits.

Since January 2007, Endesa Italia is also a party to the proceedings against EDF and AEM. The judge has rejected the addition to the file of a note from ACEA (new evidence) which assessed the damage sustained to €800 million.

The hearing relating to the substance of the case and the evidence used by ACEA to assess its damage set for June 26, 2008, was postponed several times, first to November 6, 2008, then to March 19, 2009, January 21, 2010 and finally to April 8, 2010. As EDF and its subsidiaries have refused the *inter partes* proceeding on ACEA's demand of damage assessment, a potential decision of the Italian judge in favor of this assessment should not be binding for EDF.

1. CoRDIS: *Comité de règlement des différends et des sanctions* of the CRE.

## PROCEEDING CONCERNING THE SALE OF AUSIMONT

The Public Prosecutor of Pescara opened a preliminary investigation into a suspected case of water pollution and ecological disaster affecting the river Aterno basin at Bussi sul Tirino, which for more than a century has been the site of an industrial complex belonging to Ausimont SpA that was sold to Solvay Solexis SpA in 2002.

A large quantity of industrial waste was found on a plot of land belonging to Edison adjacent to the plant, and an attachment order has been placed on that land. By order of October 4, 2007 the President of the Italian Council of Ministers appointed a special commissioner empowered to undertake urgent measures: identification, safety and rehabilitation measures for the land.

The Public Prosecutor of Pescara closed the preliminary investigation and notified certain former directors and managers of Solvay Solexis and Edison that the case would go to court on charges of water poisoning, ecological disaster and fraud to the prejudice of the site's purchaser, Solvay Solexis.

In an order of December 15, 2009, the judge heading preliminary investigations decided Montedison would not be prosecuted for fraud against Solvay, but the proceedings on the matters of environmental disaster and poisoning are continuing.

The commissioner has ordered Edison to prepare a characterization plan of the zone, take urgent measures to make it safe and present proposals for decontamination of the ground and ground water. Edison, which has never used this site for its business, has filed an appeal with the Regional Administrative Court.

## ACTION BY THE PUBLIC PROSECUTOR OF ALESSANDRIA

In 2009 the Public Prosecutor of the Republic of Alessandria, Italy sent certain managers and former directors of Ausimont Spa (now named Solvay Solexis SpA, a company sold by Montedison to the Solvay group in 2002) notification of the conclusion of investigations (under article 415 bis of the Italian Code of Criminal Procedure) into alleged poisoning of water from the spring on the industrial site of Spinetta Marengo and surrounding sites, and the lack of any action for site rehabilitation.

## PROCEEDING INITIATED BY THE HOLDERS OF THE SAVINGS SHARES AND UBS FOR DAMAGES CAUSED BY THE MERGER OF EDISON INTO ITALENERGIA

On August 9, 2002, the representative of holders of the savings shares challenged the resolution of Edison's extraordinary meeting of June 27, 2002, which decided on the merger of Edison into Italenergia. He requested that implementation of the resolution be suspended, the resolution be avoided and that Edison's responsibility be recognized for all damages caused by the merger to holders of the savings shares.

On October 9, 2002, the Court of Milan rejected the request to suspend the merger.

On April 29, 2003, UBS voluntarily joined the action and asked that Edison be ordered to pay damages for the loss in value of Edison shares and the fixing of a share exchange ratio penalizing the shareholders of Edison and therefore those of UBS.

The Court-appointed expert has filed his report in which he found that while the valuation criteria used were indeed adequate, there were some flaws in the valuation process (lack of control methods) and instances of incorrect application of the criteria that may have caused damage for the savings shareholders.

The Court of Milan, by a ruling dated July 16, 2008, ordered Edison to pay €22.5 million, plus interest and costs. On June 25, 2009 Edison and UBS reached an out-of-court settlement: Edison would pay UBS €29 million and neither party would appeal against the court's decision.

## CLAIMS BROUGHT BY EMPLOYEES CONCERNING EXPOSURE TO ASBESTOS OR OTHER HARMFUL CHEMICAL SUBSTANCES

In recent years, Edison has had to face a significant increase in the number of claims for damages arising from the death or illness of employees that were allegedly caused by exposure to several forms of asbestos at factories owned by MontEdison (having become Edison), or judicial cases taken over by Edison as a result of corporate acquisitions. In addition to provisions established specifically for certain pending disputes currently underway, Edison has decided to set aside a provision of an amount estimated on the basis of the average between the value of the claims for damages that it has received and paid in recent years for similar events and the claims that it has received so far as a result of judicial and extrajudicial proceedings.

Furthermore, Edison is involved in several criminal proceedings filed by former employees of companies belonging to the Edison group or their legal successors, arising from exposure to harmful chemical substances emitted by MontEdison's facilities (since transferred to Enimont).

## LITIGATION CONCERNING ENVIRONMENTAL MATTERS

Edison is involved in several criminal proceedings currently underway concerning damages caused by the operation of MontEdison's chemical factories (petrochemical facilities at Porto Marghera, Brindisi, Mantua, Priolo (Syracuse) and Cesano Maderno) belonging to the group prior to their transfer to Enimont. These criminal proceedings also include actions brought by third parties concerning physical injuries linked to the alleged environmental damages.

### • BE ZRT

In November 2005, the European Commission decided to start a formal investigation into long-term electricity purchase agreements (PPAs) under article 88, paragraph 2 of the EC Treaty. BE ZRt initiated appeal proceedings against this decision on March 3, 2006. The written procedure came to an end on June 9, 2008. The next step will be a court hearing at a date to be set by the Luxembourg Court of First Instance.

On June 4, 2008, without waiting for the ruling by the Court of First Instance on the appeal, the European Commission issued a decision requiring the Hungarian Government to terminate the existing PPAs by the end of 2008 and the electricity producers to refund by April 2009 any amounts of State aid received since May 1, 2004, the date at which Hungary joined the EU.

BE ZRt decided to appeal this Commission decision initially by supporting the appeals lodged before the Court of First Instance by other Hungarian producers, and then by filing its own appeal against the decision of the Commission on May 4, 2009, and a reply to the Commission's on November 30, 2009.

However, the appeal proceedings against the decision to start a formal investigation, initiated by BE ZRt before the Luxembourg court of first instance on March 3, 2006, are still ongoing.

The Hungarian Government has not challenged the decision of the European Commission. In contrast, the Hungarian legislature complied by adopting, on November 10, 2008, an act (entered into force in November 16, 2008) terminating on December 31, 2008 the PPA not terminated at that date by a mutual agreement of the parties. However, no final decision has been taken to date regarding the amount of the state aids that may have to be repaid by the Hungarian producers, failing agreement between the Hungarian State and the Commission on the method of calculating the amounts in question.

BE ZRt's PPAs were thus terminated at December 31, 2008. In order to stay in business, BE ZRt has negotiated an 8-year sales contract with MVM (the state-owned sole Hungarian buyer) for half of its electricity output, and benefited from the "cogen"[1] decree for the sale of the other half of its output, for a period until 2013.

Meanwhile, EDF International, whose investment in BE ZRt was undertaken after the company's privatization, and on specific terms which are now in question, notified the Hungarian by letter dated September 26, 2008 that it was entering into a pre-arbitration phase under the Energy Charter Treaty (ECT) and the Franco-Hungarian treaty on protection of investments. Following this, EDF International sent on May 12, 2009 a notice of arbitration to the Hungarian State on the basis of ECT, in accordance with the CNUDCI regulation. A first hearing devoted to the proceedings, held on September 25, 2009: it set the timetable of the arbitration and placed it in Switzerland, *i.e.,* outside the European Union. EDF International is finalizing its reply.

- **EnBW**

EnBW has plants in Karlsruhe and Ansbach owned respectively through its subsidiaries Grundstücksverwaltung Rheinhafen Gmbh, and Thermische Abfallentsorgung Ansbach GmbH (TAE).

The Karlsruhe plant is now closed and the Ansbach plant was never finished.

In 2004 TAE declared that it was terminating the service and construction contract for the Ansbach plant signed with Thermoselect SA. As a result Thermoselect SA sued TAE for damages amounting to some €9 million, subsequently amending its claim in December 2006 to sue TAE for €48 million. The Ansbach regional court rejected Thermoselect's action and ordered Thermoselect to pay €29 million of damages to TAE, and Thermoselect appealed this decision in May 2007. Following rejection of its claims by the Nuremberg Regional court of appeal, Thermoselect initiated action before the Germany's Supreme Federal Court in July 2009.

Also in 2004, EnBW terminated its service and construction contract for the Karlsruhe plant signed with Thermoselect SA, which initiated action against EnBW AG before the Karlsruhe regional court.

In 2006, Thermoselect SA amended its action and claimed some €580 million in damages against EnBW. The Karlsruhe regional court dismissed its claim in June 2006. Thermoselect SA began action before Germany's Supreme Federal Court in December 2007.

- **SSE**

In 2002, the Slovakian regulator adopted a resolution setting electricity tariffs applicable for 2003, without waiting for publication of a specific decree. Seven companies challenged this procedure and took the matter before the constitutional court in 2004. They won the case in 2006 when the court declared the regulator's resolution invalid.

The same companies, considering that the prices for 2003 had therefore not been validly set and that the lower tariffs from 2002 should apply, sued the State for reimbursement. Their case was dismissed, as the court ruled that the only consequence of the regulator's error was unwarranted additional income for electricity suppliers.

Following this decision, one corporate customer of SSE began legal action against SSE on September 4, 2009, claiming reimbursement of the sum of €780,905. This amount corresponds to the difference between the amount received by SSE in application of the 2003 tariffs wrongly set by the regulator and the amount it would have received if the 2002 tariffs had applied.

Two other customers of SSE also filed similar actions in December 2009, claiming amounts of €2,643,648 and €476,996 respectively.

## 20.5.3 Subsequent litigations

### CASINO

The announcement by the MEEDDEM in Autumn 2009 of an imminent decrease in the photovoltaic electricity purchase prices set by the order of July 10, 2006, caused a heavy increase in requests for purchase contracts, likely to generate a very significant increase in costs to be compensated by the CSPE (see section 6.5.1.2 ("French legislation")). In this context, the Government decided, by an order of January 12, 2010, to modify both the purchase prices of electricity generated from photovoltaic energy and their terms of application.

Several producers, including the Green Yellow companies, subsidiaries of the supply group Casino, then decided to bring proceedings against EDF before the Commercial court of Paris in order that EDF be required to purchase the generated electricity according to the more favorable tariff conditions set by the previous order of July 10, 2006. These producers consider notably, following an argument that EDF contests, that the purchase contract is constituted as soon as EDF receives the completed purchase request.

It is possible that other proceedings with a similar objective commence in the future. In any case, at the date on which the present *Document de Référence* was filed, no court ruling had been issued in this respect.

1. Decree setting out terms including the tariff for renewable energies and cogeneration, adopted by the Hungarian Government on November 28, 2008 ("Cogen decree").

# 20.6 Significant change in the company's financial or trading position

The significant events that took place between the end of the 2009 financial year and the date of filing of the present *Document de Référence* are mentioned in note 48 to the consolidated financial statements for the fiscal year ended December 31, 2009 as to events that took place before the financial statements were drawn up by the Board of Directors on February 10, 2010, and in section 9.13 ("Subsequent events") of this *Document de Référence* as to events that took place afterwards.

# Additional information

21



21.1

## General information regarding the Company's share capital

### 21.1.1 Issued share capital amount at the time of the filing of the present *Document de Référence*

As of the date of the filing of this *Document de Référence*, the Company's share capital breaks down as follows:

| | |
|---|---|
| Number of issued shares: | 1,848,866,662 |
| Nominal value of the issued shares: | €0.50 per share |
| Legal status of the issued shares: | Common shares |
| Total amount of the share capital: | €924,433,331 |

All share capital issued by the Company has been paid up.

At the time of the filing of the present *Document de Référence*, the Company has not issued nor authorized any preference shares.

### 21.1.2 Ownership of shares and control by the Company

**SHARE REPURCHASE PROGRAM IN FORCE AS OF THE DATE OF THE FILING OF THIS *DOCUMENT DE RÉFÉRENCE* (PROGRAM AUTHORIZED BY THE ORDINARY SHAREHOLDERS' MEETING OF MAY 20, 2009).**

The Shareholders' Meeting of May 20, 2009, after examination of the report from the Board of Directors and in accordance with the provisions of Article L. 225-209 *et seq*. of the French Commercial Code, authorized under its seventh resolution the implementation by the Board of Directors of a share repurchase program of up to a maximum of 10% of the Company's share capital. That resolution immediately terminated the authorization to repurchase Company shares granted by the sixth resolution of the Shareholders' Meeting of May 20, 2008, for the fraction which was not used.

The aims of the share repurchase program are as follows:

- to grant shares in connection with the conversion of securities giving access by any immediate or future means to the share capital of the Company as

well as conduct any hedging transactions with respect to EDF's (or one of its subsidiaries) obligations connected with such securities, in accordance with the conditions stipulated by market authorities and at such times that the Board of Directors or the person acting upon delegation of the Board shall determine;
- to maintain shares for future grants in exchange or as payment in the context of external growth operations;
- to ensure the liquidity of EDF's shares through an investment services provider under a liquidity agreement complying with the ethics charter recognized by the French financial market Authority (AMF);
- to attribute shares to employees of the EDF group, and in particular, within the framework of any stock purchase or stock grant plans for the benefit of employees on the terms provided by law and, in particular, by Articles L. 225-197-1 *et seq*. of the French Commercial Code or Articles L. 3332-1 *et seq*. of the Labor Code, as well as performing any hedging operations related to such operations, on the terms provided by the French financial market Authority (AMF) and at such time as determined by the Board of Directors or the person acting by delegation of the Board of Directors;
- to reduce the Company's share capital by cancellation of all or part of the shares purchased.

Purchases of the Company's shares may concern any number of shares such that:
- the number of shares that the Company purchases during the duration of the repurchase program does not exceed 10% of the shares comprising the Company's share capital as of the date of the Shareholders' Meeting of May 20, 2009; and
- the number of shares that the Company holds at any time does not exceed 10% of the shares comprising the Company's share capital.

The acquisition or transfer of these shares may be carried out, on the terms and within the limits, including as to volumes and price, provided by the laws in effect on the date of the relevant operations, by any means, including on the market or by direct sales, including through acquisition or sale of blocks, by recourse to derivative financial instruments or to notes or securities giving access to Company shares, or by implementing optional strategies, on the terms provided by the financial market authorities and at such time as determined by the Board of Directors or the person acting by delegation of the Board of Directors.

The portion of the repurchase program which may be performed through trading in blocks is unlimited. The maximum amount of funds for carrying out this share repurchase program is €2 billion.

Under this program, the repurchase price must not exceed €90 per share.

The Board of Directors may, however, adjust the aforementioned purchase price in the case of incorporating bonuses, reserves or profits, giving rise either to an increase in the shares' par value or to the creation and free distribution of shares, and in the case of a stock split or grouping together of shares, or any other operation involving equity, in order to take into account the effect of these operations on the shares' value.

This authorization is granted for a maximum duration of 18 months as of the Ordinary Shareholders' Meeting which took place on May 20, 2009. This authorization may be used during public tender offers, within the limits set by applicable regulations.

The number of shares purchased by the Company for the purposes of holding them or using them as payment or exchanges in connection with a merger, spin-off or capital contribution operations cannot exceed 5% of its share capital.

The Board of Directors will have all powers in order to implement the authorization, with the possibility of delegating its powers, for the purpose of:
- making any orders on the market or over-the-counter;
- allocating or reallocating the shares purchased for the various objectives pursued under the applicable legal and regulatory conditions;
- concluding any agreements in order, among other things, to keep share purchase and sale registers;
- making any declarations and carrying out any formalities with the French financial market Authority (AMF) and with any other organization; and
- carrying out any other formalities and, generally speaking, doing all that is necessary and appropriate.

Each year, the Board of Directors must inform the Shareholders' Meeting of each of the operations performed pursuant to this authorization to perform operations involving the company's shares.

## SUMMARY OF THE TRANSACTIONS EFFECTED BY THE COMPANY WITH RESPECT TO ITS SHARES AS PART OF THE PROGRAM AUTHORIZED BY THE ORDINARY SHAREHOLDERS MEETING OF MAY 20, 2008.

A liquidity agreement was entered into on May 24, 2006 with *Crédit Agricole Cheuvreux* for a period of one year, renewed by tacit agreement. The initial amount of €35,000,000 has been applied to the liquidity item in relation with the implementation of the liquidity agreement, as of its execution, in accordance with the Company's shares repurchase program. Between January 1, 2009 and December 31, 2009, the Company repurchased, within the framework of the liquidity agreement, 2,208,559 of its own shares on the basis of an average amount of €35.11 per share and sold 2,480,559 shares on the basis of an average amount of €36.02 per share.

By December 31, 2009, the Company held, within the framework of the liquidity agreement, 185,000 treasury shares, amounting to 0.01% of its share capital.

Throughout 2009 financial year, the stand-by fee paid by EDF pursuant to the liquidity agreement amounted to €150,000. As of January 1, 2010 and until February 28, 2010, the Company repurchased 999,874 of its own shares on the basis of an average amount per share of €38.66 and sold 394,874 shares on the basis of an amount per share of €39.54.

The Company also held at December 31, 2009, 50,669 shares acquired on the market, for allocation to employees within the framework of the plan "ACT2007" and non-alloted.

In addition, as of the date of filing of this *Document de Référence*, the Company holds 874.3 units in the "Énergie Multi" compartment of the fund of the Company's mutual fund "EDF Actions", which correspond to 8,743 Company shares (approximately 0.00048% of the share capital as of the date of the present *Document de Référence*). These shares are due to share purchase orders which were cancelled in the offering reserved to the EDF group's employees (as described in the prospectus which received the AMF visa number 05-743 on October 27, 2005). By the end of the five-year lock-up period, these 874.3 units will be sold, and the amount received will be paid to the French State.

**RESOLUTION RELATING TO THE AUTHORIZATION GIVEN TO THE BOARD OF DIRECTORS TO PERFORM OPERATIONS INVOLVING THE COMPANY'S SHARES, SUBMITTED TO THE COMBINED SHAREHOLDERS MEETING OF MAY 18, 2010**

In its February 11, 2010 meeting, the Board of Directors decided to include in the combined Shareholders' Meeting of May 18, 2010 agenda, the vote of share repurchase program, similar in certain points to the one authorized by the May 20, 2009 Shareholders' Meeting, notably for what concerns the goals of that program and the limited number of shares which can be repurchased.

## 21.1.3 Bonds

In accordance with Article L. 228-40 of the French Commercial Code, only the Board of Directors can decide or authorize the issuance of bonds, except if the general Shareholders' Meeting decides to exercise this power.

On the basis of Article 46 paragraph 2 of the law of August 9, 2004, the first paragraph of Article L. 228-39 of the French Commercial Code which states that *"the issuance of bonds by a "société par actions" which has not presented two balance sheets regularly approved by shareholders requires a prior audit of the Company's assets and liabilities as described by Articles L. 225-8 and L. 225-10 of the French Commercial Code"* is not applicable to EDF since 2004.

On April 18, 1996 EDF implemented a program for the issuance of debt securities under the Euro Medium Term Notes ("EMTN") program. Since then the program has been renewed every year.

An update of the program for the issuance of debt securities for a maximum amount of €16 billion was implemented on May 18, 2009, by the Group.

In this context, EDF notably issued during the summer 2009 bonds to the general public in France for a total of nearly €3.3 billion, due 2014.

On December 31, 2009, the outstanding amount of the debt of EDF in the form of bonds (borrowings issued as EMTNs and other debt securities) was €29.46 billion.

## 21.1.4 Other securities giving access to the share capital

At the time of the filing of the present *Document de Référence*, besides ordinary shares of the Company, there are no other securities giving access, directly or indirectly, to the share capital of EDF.

## 21.1.5 Authorized but un-issued capital

The table below presents a summary of the delegations and authorizations into force on the date of filing of the present *Document de Référence*, granted to the Board of Directors by the Ordinary and Extraordinary Shareholders' Meeting of the Company held on May 20, 2009 to increase the share capital:

| | Delegations to the Board of Directors by the Extraordinary Shareholders' Meeting | Maximum Nominal Amount of Capital Increase (in €millions) | Duration of Delegation[1] |
|---|---|---|---|
| 1. | Delegation of authority to the Board for a share capital increase with maintenance of preferential maintenance of preferential subscription rights of shareholders | 45 | 26 months |
| 2. | Delegation of authority to the Board for a share capital increase without maintenance of preferential subscription rights of shareholders | 45[2] | 26 months |
| 3. | Delegation of authority to the Board to increase the number of shares to be issued in the event of a share capital increase in the context of issuances pursuant to Items 1 and 2 | 15% of the initial issuance[2] | 26 months |
| 4. | Delegation of authority to the Board to increase the share capital through incorporation of reserves, profits, share premiums or other amounts which capitalization would be admitted | 1,000 | 26 months |
| 5. | Delegation of authority to the Board to increase the share capital in compensation for an exchange offering initiated by the Company | 45[2] | 26 months |
| 6. | Delegation of powers to the Board to increase the share capital as consideration for contributions in kind made to the Company (Article L. 225-147 of the French Commercial Code) | 10% of the share capital of the company[2][3] | 26 months |
| 7. | Delegation of powers to the Board to increase the share capital for the benefit of participants in a savings plan | 10 | 26 months |

*(1) Beginning from the date of the Ordinary and Extraordinary Shareholders' Meeting of May 20, 2009.*
*(2) Up to the upper limit set forth in Item 1, i.e., €45 million.*
*(3) As of the date of the Ordinary and Extraordinary Shareholders' Meeting of May 20, 2009.*

At its February 10, 2010 meeting, the Board of Directors decided to submit to the May 18, 2010 Shareholders' Meeting the renewal of these delegations.

### 21.1.6 Information about share capital of Group members, subject to conditional or unconditional agreements

Investment and divestment commitments on the shares of the subsidiaries are described in note 27.5 to the consolidated financial statements for the financial year ended December 31, 2009. Apart from the investment and divestment commitments and other commitments described in section 6 of the present *Document de Référence*, EDF has not entered into any offer to sell or purchase whole or part of the share capital of the Company or one of its subsidiaries, as defined in article L. 233-1 of the French Commercial Code.

### 21.1.7 Shareholder agreements

At the time of the filing of the present *Document de Référence*, and to the Company's knowledge, no shareholder agreement has been concluded that concerns the Company's securities.

### 21.1.8 Security interests in the Company's securities

To the Company's knowledge, none of the Company's ordinary shares is the object of any security interest.

### 21.1.9 Evolution of the Company's share capital

In order to comply with the law of August 9, 2004, EDF has become a *"société anonyme"* on November 20, 2004 and its share capital was fixed at €8,129,000,000, divided in 1,625,800,000 shares of a €5 nominal value each.

On August 31, 2005, the EDF general Shareholders' Meeting gave full authority to the Board of Directors to effect a capital reduction by the maximum amount of €7,316,100,000, by means of the reduction of the shares' nominal value of €5 to a minimum of €0.5. At its meeting of October 27, 2005, the Board of Directors has resolved to reduce the share capital by the amount of €7,316,100,000, by reducing the share nominal value by €4.5, from €5 to €0.5. The share capital was thus reduced to €812,900,000.

At its November 18, 2005 meeting, the Board of Directors, exercising the authority granted to it by the October 10, 2005 Shareholders' Meeting, has resolved to proceed with the Company's capital increase through the French retail public offering and the institutional placement, in the context of the initial public offering of the Group. The share capital was thus increased to €906,834,514.

On December 20, 2005, Calyon (now called Crédit Agricole-CIB) paid to EDF the price due on the exercise of 8,502,062 over-allotment options that EDF Board of Directors had decided to issue for the benefit of Calyon at its November 18, 2005 meeting. The share capital was thus increased to €911,085,545, divided into 1,822,171,090 ordinary shares.

The payment of the dividends in shares on December 17, 2009 resulted in a share capital's increase of €13,347,786.00, following the issuance of 26,695,572 shares (see section 20.4.1 ("Dividends and interim dividends paid within the last three financial years")).

The share capital has thus been increased to €924,433,331 divided into 1,848,866,662 ordinary shares.

## 21.2 Incorporation documents and articles of association

### 21.2.1 Company's purpose

The Company's purpose, both in France and abroad, is to:

- secure generation, transmission, distribution, supply and trading of electrical energy and secure the import and export of this energy;
- carry out the public service missions assigned by laws and regulations, especially by the French law of June 15, 1906 regarding energy distribution, the aforementioned French laws of April 8, 1946 and February 10, 2000 and Article L. 2224-31 of the French Code for Local Authorities, as well as by the concession agreements, and in particular, the missions regarding the development and operation of the public electricity networks, the energy supply to non-eligible customers, the supply of emergency energy to producers and customers to compensate unexpected power failures and the supply of energy to eligible customers who cannot find any other supplier, while contributing to the accomplishment of the goals defined by the multi-annual generation investments program implemented by the Minister in charge of the Energy;
- more generally, develop any industrial, commercial or service activity, including research and engineering activities in the energy field, for all customer categories;
- increase the value of all tangible and intangible assets it has or uses;
- create, acquire, rent out or lease management of all property, real estate and businesses, lease, set up and operate all establishments, businesses, plants and workshops relating to any of the aforementioned purposes;
- take, acquire, operate or sell all processes and patents concerning activities which relate to any of the aforementioned purposes;
- take part, directly or indirectly, in any operation connected to one of the aforementioned purposes, by creating new companies or undertakings, by contributing, subscribing or purchasing any securities, by taking part in investments or by merging, associating or any other manner whatsoever;
- more generally, engage in any industrial, commercial, financial, property or real estate operations directly or indirectly connected, in whole or in part, to one of the aforementioned purposes, to any similar or connected purpose or even to any purpose which may favor or develop the Company's business.

## 21.2.2 Company's fiscal year

Each Company's fiscal year lasts 12 months: it starts on January 1 and terminates on December 31 of each year.

## 21.2.3 Management

The Company is managed by a Board of Directors consisting of 18 members in accordance with the provisions of the French law of July 26, 1983, as amended, relating to the democratization of the public sector, in particular, Article 6 thereof, and with the provisions of the French Statutory decree of October 30, 1935, as amended, organizing the French State's financial control of companies having requested financial support from the French State.

Within this framework, as of the date of the filing of the present *Document de Référence*, the Board of Directors included six representatives of the French State, appointed by decree and six representatives of the employees elected in accordance with the provisions of section II of the aforementioned French law of July 26, 1983.

The Board of Directors may include, at most, two members of the French Parliament or holders of a local electoral mandate selected for their knowledge of regional, departmental and local aspects of energy issues.

The Board must appoint a Secretary but is free to choose a person who is not a member of the Board.

The Chairman and Chief Executive Officer must communicate to every member of the Board all documents and information required for the fulfillment of their task.

The duration of the mandate of members of the Board of Directors is five years. In case of a vacancy for any reason whatsoever of the seat of a member of the Board of Directors, his/her replacement will only hold office for the remaining duration of the term until the renewal of the full Board of Directors.

The general Shareholders' Meeting sets the amount of the directors' fees, if any. Members of the Board of Directors who have not been elected at the general Shareholders' Meeting are not entitled to a financial remuneration.

Other costs paid by the members of the Board as a part of their mission will be reimbursed by the Company, provided that they present a justification.

Employees' representatives are entitled to a time credit corresponding to half of the legal working period.

Each member of the Board of Directors who has been appointed by the general shareholder's meeting must hold at least one nominative share of the Company's capital. The shareholder's meeting can also decide to dismiss him.

At the Chairman and Chief Executive Officer's request, the Board of Directors can, if it thinks that it is necessary and according to the meeting's agenda, invite Company members or even persons who are external to the Company to attend the Board's meeting without being able to vote.

The Secretary of the Works Committee or any equivalent institution attends the Board of Directors' meetings but without the right to vote.

Any person attending one of the Board of Directors' meetings is subject to the same confidentiality obligations as the members of the Board.

In accordance with the aforementioned law of 1983, the Chairman of the Board of Directors is appointed by decree, from among the directors, following a proposal made by the Board of Directors. The duration of the Chairman's duties may not exceed that of his term of office as a director. His mandate may be renewed under the same conditions as those of his appointment. The Chairman mandate may be revoked by decree. Since the Shareholders' Meeting of February 14, 2006, which decided to modify EDF's by-laws, the Chairman of the Board of Directors may not be older than 68 years old; otherwise he will automatically be deemed to have resigned.

The management of the Company is assumed by the Chairman of the Board of Directors, who bears the title "Chairman and Chief Executive Officer". He must therefore comply with all the laws and regulations applicable to Chief Executive Officer.

In accordance with Article L. 228-40 of the French Commercial Code, the Board of Directors may delegate the necessary authority to the Chief Executive Officer or, if he agrees, to one or several Chief Officers, in order to carry out, within one year, the issuance of bonds and settle its terms and conditions. The Board of Directors will also settle, in the same deliberation, the terms and conditions under which the Chief Executive Officer or his deputies will account to the Board for the exercise of these powers.

## 21.2.4 Rights attached to shares

Each share entitles its holder to a share of the Company's profits and assets which is proportional to the part of the Share capital that it represents.

Moreover, each share confers a voting right and the right to be represented at the general shareholder's meetings in accordance with legislative, regulatory and statutory conditions and restrictions.

On the date of the present *Document de Référence*, EDF has issued only one class of shares.

The ownership of a share automatically entails acceptance of the articles of association and of the decisions of the general Shareholders' Meeting.

Shareholders shall only bear losses up to the amount of their contributions.

The heirs, creditors, assigns and other representatives of a shareholder cannot request the affixture of seals to the assets and securities of the Company, nor may they demand the partition or sale by auction of property, nor interfere in the Company's management; in order to exercise their rights they must refer to the Company's inventory and to the decisions of the general Shareholders' Meeting.

Whenever it will be necessary to hold several shares in order to be entitled to exercise a right, in the event of exchange, consolidation and allocation of shares, or due to a capital increase or decrease, a merger or any other corporate operation, the holders of isolated shares or whose number of shares is not enough cannot exercise their right unless they arrange a consolidation or the sale or the purchase of the required number of shares.

The shareholder can decide whether his shares will be in registered or in bearer form, subject to compliance with laws and regulations.

The shares can be registered under the name of an intermediary, subject to the conditions of Article L. 228-1 *et seq*. of the French Commercial Code. The intermediary must state his status as an intermediary who is holding shares for someone else, according to laws and regulations. These provisions are also applicable to other securities issued by the Company.

In accordance with the present laws and regulations, the Company is entitled to claim from the central depositary, at any time and provided that it grants a financial compensation, that he reveals the name or the corporate name, the nationality, the date of birth or incorporation and the address of the holders of shares in bearer form which may, at the present time or in the future, award a voting right in its own general Shareholders' Meetings. The Company is also entitled to know the number of shares held by each of

these shareholders and any restrictions these shares can be subject to. In light of the list provided by the above-mentioned entity, the company can ask the persons mentioned on the list and who can be considered by the company as holding personal account the above-mentioned information relating to the shareholders.

If shares in registered form are concerned, giving immediate or delayed access to the share capital, the intermediary registered pursuant to article L. 228-1 mentioned above must reveal the identity of the share owners as soon as the company or its mandatory so requires within 10 business days from the request, and the request can be made at any time.

## 21.2.5 Sale and transfer of shares

Shares are freely negotiable subject to legislative and statutory provisions. They shall be subject to registration to an account and shall be moved by transfer from account to account. These conditions shall also apply to other securities of any nature issued by the Company.

Apart from the legal obligation to inform the company when certain thresholds of share capital or voting rights are held, any person who, directly or indirectly, acting alone or in concert with others, acquires ownership or control of shares representing 0.5% of the Company's share capital and/or voting rights will be required to notify the Company, by a registered letter, the number of shares and voting rights it holds within five trading days of the book entry of the shares.

The intermediary registered as shareholder must make the above-mentioned declarations, independently from the obligations of shareowners.

This declaration must be renewed under the above-mentioned conditions each time a new threshold of 0.5% is reached or is crossed, whether on the upswing or in the downswing, and whatever the reason, even above the 5% threshold mentioned in article L. 233-7 of the French Commercial Code.

If a person does not comply with the above-mentioned provisions, the shareholder(s) concerned will be stripped of voting rights corresponding to the shares exceeding the thresholds, under the conditions provided by law.

## 21.2.6 Shareholders' Meetings

### 21.2.6.1 MEETINGS, ADMISSION CONDITIONS, VOTING RIGHTS

Shareholders' Meetings are convened by the Board of Directors or, by default, by the auditors or by any authorized person. They shall be held at the registered head office or any other place indicated in the notice. They may take place by video conference or by means of telecommunication allowing for the identification of the shareholders, the nature and conditions of which are determined by articles R. 225-97 to R. 225-99 of the French Commercial Code. In such cases, shareholders attending the meeting by such means are deemed to be present for the calculation of the quorum and majority in accordance with legal requirements.

Shareholders' Meetings are comprised of all of the shareholders whose shares are fully paid up and have been registered to an account in their name at least five days before the date of the meeting, in accordance with the following conditions:

- holders of bearer shares or shares in their name registered to an account not held by the Company must, in order to be entitled to attend, to vote by correspondence or to be represented at Shareholders' Meetings, present, at the place specified in the notice of the meeting, a certificate issued by the intermediary attesting the non-availability of the shares until the date of the Shareholders' Meeting, at least five days before the date of the meeting; and
- the owners of shares in their name registered to an account held by the Company must, in order to be entitled to attend, to vote by correspondence or to be represented at Shareholders' Meetings, have their shares registered to their account held by the Company at least five days before the date of the Shareholders' Meeting.

The Board of Directors may, however, shorten or cancel these five-day time restrictions.

Access to the Shareholders' Meeting is open to its members upon simple production of documentation confirming their status and identity. The Board of Directors may, should it see fit, produce and distribute to shareholders personal admission cards and require these cards to be presented.

Any shareholder may be represented by his or her spouse or another shareholder at a Shareholders' Meeting. The owners of shares legitimately registered in the name of an intermediary in accordance with the conditions provided for in Article L. 228-1 of the French Commercial Code may be represented in accordance with the conditions provided for in such Article by a registered intermediary.

A shareholder may also vote by correspondence after having had his or her status as a shareholder attested to at least five days before the Shareholders' Meeting, by the depositary or by registered certificate(s). As from the date of this attestation, the shareholder will not be able to choose any other method of participation at the Shareholders' Meeting. The Company must receive the ballot at least three days before the meeting.

Powers of attorney, correspondence voting forms and attestations of immobilization of shares may be prepared in electronic form and duly signed in accordance with the legislative and regulatory conditions applicable in France.

### 21.2.6.2 DOUBLE VOTING RIGHTS

None.

### 21.2.6.3 LIMITATION OF VOTING RIGHTS

None.

## 21.2.7 Statutory device which would delay a takeover of the Company

According to EDF's by-laws, modifications in its share capital cannot have as a consequence the reduction of the French State's shareholding below the legal threshold of 70%. Apart from this, no other provision in the constituting or organizational documents prevents or delays a takeover of the company by a third party.

## 21.2.8 Obligations relating to changes in share capital

The share capital can be increased, decreased or redeemed under the conditions defined by the law.

# Material contracts

22

Apart from the agreement described in chapter 6 of this *Document de Référence*, and those described hereinafter, EDF has not entered into any major contract except for those of its daily business within the last two years preceding this *Document de Référence*:

- Public service contract described in section 6.4.3.4 ("Public service in France");
- the contracts entered into with A2A S.A. (formerly AEM S.p.A.) relating to the joint takeover of Edison mentioned in section 6.3.1.3.1.2 ("Joint takeover of Edison by EDF and A2A");
- the industrial partnership agreement entered into with Exeltium and detailed in section 6.2.1.2.2.2 ("Activity by market");
- the cooperation agreement entered into with Enel relating to nuclear mentioned in section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France") and Memorandum of Understanding relating to fossil-fixed generation means mentioned section 6.2.1.1.5 ("Fossil-fired generation ("THF")");
- partnership agreement entered into with Constellation Energy mentioned in section 6.3.2.2 ("UniStar Nuclear Energy");
- the agreement entered into with Constellation Energy in respect of the acquisition of 49.99% of the nuclear activities of Constellation Energy (see section 6.3.2.3 ("Acquisition of 49.99% of the nuclear assets of CEG"));
- joint-venture agreement entered into with China Nuclear Power Energy Corporation mentioned section 6.3.3.1 ("The EDF group's activities in China").

For information relating to the contracts concluded by the Group during the 2009 financial year, see notes 12 and 46 to the consolidated financial statements for the financial year ended December 31, 2009.

# 23 Third party information and statement by experts and declarations of any interest

None.

# Documents available to the public

24



## 24.1 Consultation of legal documents

All the legal documents relating to the Company (by-laws, reports, mail and other documents, historic financial information of EDF and its subsidiaries for the two years preceding the filing of this *Document de Référence*) which must be made available to the public are available at no charge, during the validity of this *Document de Référence*, at EDF head office, 22-30, avenue de Wagram, 75382 Paris Cedex 08.

Appendix C of this *Document de Référence* summarizes all the information made known to the public by the EDF group during the last 12 months, in accordance with article 222-7 of the AMF Regulations.

## 24.2 Person responsible

David Newhouse

Senior Vice-President Investor Relations

Tel: 01.40.42.32.45

Email: comfi-edf@edf.fr

# Information on holdings

25

For information about the companies in which EDF holds an interest that may have a significant effect on assessing its holdings, its financial situation or its financial results, see Chapter 7 ("Organizational structure") and Chapter 6 ("Business overview") as well as note 49 to the consolidated financial statements for the year ended December 31, 2009.

# Glossary

**ANDRA (*Agence nationale pour la gestion des déchets radioactifs*)**

The French law of December 30, 1991 established a public industrial and commercial body, the National Agency for the Management of Nuclear Waste (*Agence nationale pour la gestion des déchets radioactifs*, or "ANDRA"), responsible for the long-term management of radioactive waste. To this end, the Agency, which reports to the Industry, Research and Environment Ministries, brought into service the storage centers based in the Aube region of France for the long-term management of short-lived waste.

**Architect-Assembler**

For EDF, the architect-assembler has control over:
- the conception and operation of power plants;
- the organization of development projects;
- the schedule of the completion and costs of construction;
- relations with the Nuclear Safety Authority or NSA; and
- the integration of feedback from operational experience.

EDF's role as architect-assembler ensures the control over its industrial policy with respect to the design, construction and operation of its fleet of power plants.

**Balance Responsible Entity**

Entities with which RTE signs a contract for the financing of shortfalls between forecast and actual consumption and the production of a portfolio of users brought together by the balance responsible entity which plays a role of insurer covering the potential losses arising from the many differences between over- and under- supply.

**Balancing Mechanism**

Created by RTE on April 1, 2003, the balancing mechanism gives access to available power reserves as soon as an imbalance develops between supply and demand.

**Becquerel (Bq)**

International legal unit for measuring radioactivity. The Becquerel (Bq) is equal to one disintegration per second. This unit represents such a low level of activity that it is used in multiples: the MBq (megabecquerel or million Becquerels) and the GBq (gigabecquerel or billion Becquerels).

**Capacity Auctions**

At the beginning of 2001, the Group agreed to auction a portion of its generation in order to allow European energy groups to compete in the French market just as EDF competes in foreign markets. This agreement, signed with the European Commission, stipulated that EDF would sell 6,000 MW of its electricity 'capacities' or 8% of the electricity generated in France.

**Changes in the Group's Scope of Consolidation**

The changes in the Group's scope of consolidation in any given year take into account the acquisitions, disposals and changes in the scope of consolidation within the Group.

**Cogeneration**

Generation technique for combined electricity and heat production. The advantage of cogeneration is the ability to capture the heat produced by the fuel whereas in classical electricity generation this heat is lost. This process also allows the same facility to meet the heating (hot water or steam) and electricity needs of both industrial and local authority customers. This system improves the energy efficiency of the generation process and reduces fuel use by an average of 20%.

**Combined-Cycle Gas**

The most up-to-date technology for generating electricity in a natural gas-fired plant. A combined cycle is made up of one or several combustion turbines and a steam turbine allowing for an improved yield. The syngas is routed to the combustion turbine, which generates electricity and very hot exhaust gases. The heat from the exhaust gases is retrieved by a boiler, thus producing steam. Part of the steam is then retrieved by the steam turbine to generate electricity.

# Glossary

**Congestion**

Situation in which an interconnection linking the national transmission networks cannot absorb all of the physical flows resulting from the international exchanges required by market operators due to a shortage of capacity in the interconnection and/or the national transmission networks involved.

**Conversion/Fluorination**

Also called "conversion", fluorination allows for the purification of uranium compounds and their transformation Into uranium hexafluoride ($UF_6$), allowing their enrichment using current techniques.

**CRE (*Commission de Régulation de l'Énergie*)**

The French Energy Regulation Commission (*Commission de Régulation de l'Énergie*, or "CRE") was created on March 30, 2000. Its aim is to monitor the correct functioning of the electricity market. The CRE, an independent body, regulates the process of energy market opening. It ensures that all of the generators and eligible customers have equal access to the network. Within its jurisdiction, this body has powers of supervision and authorization along with the power to settle any disputes and, if required, impose sanctions. For a detailed description of its powers, see section 6.5.1.2 ("French legislation").

**Distribution Network**

Downstream from the transmission network, the distribution networks (low and medium voltage) supply the final customer: residential customers, local authorities, small- and medium-sized enterprises.

**DNN (*Distributeur non Nationalisé*)**

Non-nationalized distributor.

**Downstream**

See "Fuel Cycle" and "Downstream Asset Portfolio".

**Downstream Asset Portfolio**

Total contractual commitments to sell energy to operators or final customers.

**EAR (Earning at Risk)**

Financial indicator which gives the statistical measure of the risk of maximum potential loss of a company's profit compared with forecast profit in the event of unfavorable market movements over a given time and a given confidence interval.

**EBITDA**

Earnings before interest, taxes, depreciation and amortization, corresponds to French "excédent *brut d'exploitation*".

**Electricity Supply**

Electricity demand can be broken down into four types of consumption:
- "basic" (or "ribbon") supply is the electricity generated and consumed throughout the year;
- "semi-basic" supply is the electricity generated and consumed over the winter period;
- "peak" supply corresponds to periods of the year when electricity generation or supply is in heavy demand;
- "lace" supply is a complement to "ribbon" supply.

**Electricity Value Chain**

The electricity value chain includes both deregulated activities (generation and supply) and regulated activities (transmission and distribution).

**Energy Gross Margin**

The energy gross margin is built from accounting data in the income statement and represents the margin on energy costs, fuels and delivery coming from energy sales (i.e., electricity and gas).

**Enriched Uranium**

Uranium whose isotope 235 content, the only fissile material, has been increased from its low natural level (0.7%) to approximately 4% for pressurized water reactor fuel.

**Enrichment**

Procedure by which the fissile content of an element is increased. In its natural state uranium is 0.7% uranium 235 (fissile) and 99.3% uranium 238 (non fissile). To enable its efficient use in a pressurized water reactor, it is enriched in 235 uranium whose proportion is increased to around 4%.

**EPR**

*European Pressurized Reactor*. Belonging to the most recent generation of reactors currently under construction (known as generation 3), it is the result of a Franco-German cooperation, and offers advanced safety, environmental and technical performance.

**FNCCR**

French National Federation of Licensors and Local Utilities (*Fédération Nationale des Collectivités Concédantes et Régies*, or "FNCCR").

**Fuel**

See "Fuel/Assembly".

**Fuel/Assembly**

Nuclear fuel is in the form of an assembly made up of an array of 264 fuel rods, bound together by a rigid structure made of tubes and grids. Each fuel rod consists of a water-tight zirconium tube into which uranium oxide pellets are piled, constituting the fuel. The assemblies are loaded side by side into the reactor vessel – 205 assemblies are required for a 1,500 MW reactor – to make up the core of the reactor. While in operation, the primary coolant runs through these assemblies from bottom to top, warming up in the process, and carries the resulting energy towards the steam generators.

**Fuel Cycle**

The nuclear fuel cycle encompasses all industrial operations in France and abroad which enable the supply of the fuel to generate energy in a reactor, then to unload and process it. The cycle can be broken down into three stages:

- upstream: the processing of concentrates from uranium ore, the conversion, enrichment and production of fuel (which takes more than two years);
- the core of the cycle corresponding to the use of fuel in the reactor: receipt, loading, operation and discharging (which takes three to five years); and
- downstream: pool storage, reprocessing of burnt fuel in reactors of recoverable material, vitrification of high-level waste, then temporary storage of the waste before storage.

**Generic Hazard**

In the nuclear field, an unpredictable technical incident common to a set of nuclear plants.

**Greenhouse Emissions**

Gas retaining part of the solar radiation in the atmosphere and where the increase in its emission is due to human activities (anthropic emissions), producing an increase in the world's average temperature and playing a significant role in climate change. The Kyoto Protocol and the 2003/87/EC modified directive of October 13, 2003 address the six main greenhouse gases: carbon dioxide ($CO_2$), methane ($CH_4$), nitrogen monoxide ($N_2O$), fluorocarbons (HFC), perfluo- rocarbons (PFC) and sulfur hexafluoride ($SF_6$). For the period from 2005-2007, carbon dioxide was the subject in Europe of measures to reduce emissions with the application of national plans for the allocation of greenhouse gas quotas. For the 2008-2012 period, the scope of concerned gases tends to widen. Eventually, gases listed in Annex II of the directive but also "any other gaseous component of the atmosphere, both natural and anthropogenic, that absorb and reemit infrared radiation" are concerned (amended directive, adopted but not yet published).

**IAEA**

International Atomic Energy Agency, based in Vienna (Austria).

**Impact of Exchange Rate Variations**

The impact of exchange rates entered in the income statement for a financial year, reflects the variations in average exchange rate between the euro and another operational currency in use by the subsidiaries within the Group's scope of consolidation.

**Interconnection**

Electricity transmission infrastructure, which allows for the exchange of energy between different countries, linking the transmission network of one country with its neighboring states.

**Intermediate Storage**

Intermediate stage in the process of managing nuclear waste. It involves placing waste packages in a facility to ensure, for a given period of time, their isolation from contact with man and the environment with a view to retrieve them for a further stage in the waste management process.

Intermediate storage facilities are designed, built and managed by the producers of such waste (EDF, AREVA NC (formerly COGEMA), CEA) and are close to areas where waste is conditioned.

**Interruptibility**

A customer's voluntary reduction in electric power for compensation.

**LDC**

French local distribution companies.

**LNG (Liquefied Natural Gas)**

Natural gas turned into liquid form by reducing its temperature to –162C allowing for a reduction by 600 in its volume.

**Metering**

System allowing for the measurement, at a given point of the network connection, of the electricity volumes being transmitted or distributed (power, frequency, active and reactive energy).

# Glossary

**Midstream**
All assets of the gas business, allowing for its availability, transportation and management. These might be infrastructure (gas pipelines, storage facilities, GNL terminals, etc.) or contractual (rights relating to pre-determined capacity, procurement contracts, etc.). The midstream segment includes the trading and negotiating activities.

**MOX**
"Mixed Oxides". Nuclear fuel based on a mixture of uranium oxides (natural or depleted) and plutonium.

**MW/MWh**
The MWh is the energy unit generated by a facility and is equal to the facilities' power, expressed in MW, multiplied by the duration of operations in hours.
1 MW = 1,000 kilowatts = 1 million watts
1 MWh = 1 MW generated in one hour = 1 megawatt hour
1 GW = 1,000 MW = 1 billion watts
1 TW = 1,000 GW

**NAP (National Allocation Plan)**
This plan defines the total quantity of quotas that the State plans to grant for the quotas exhange system for each multi-year period (NAP 1 2005-2007, NAP 2 2008-2012) and the allocation method used to allocate allowances to the industrial installations concerned.

**Non-interconnected Zones**
Zones in France which are not connected to metropolitan France (Corsica and Overseas departments).

**NSA (*Autorité de Sûreté Nucléaire*)**
The French Nuclear Safety Authority (*Autorité de Sûreté Nucléaire*, or "NSA") manages, on behalf of the French State, nuclear safety and radioprotection in France to protect workers, patients, the public and the environmental risks associated with the use of nuclear energy. It is notably in charge of the external control of nuclear facilities in France. The French NSA is an independent administrative authority with more than 300 staff. The French NSA is represented at the national level by the Directorate General for Nuclear Safety and Radioprotection (*Direction Générale de la Sûreté Nucléaire et de la Radioprotection*, or "DGSNR").

**Nuclear Generating Unit**
Electricity generation unit, composed of a nuclear boiler and a turbogenerator set. A nuclear plant unit is essentially characterized by the type of reactor and the power of the turbogenerator set. Most EDF nuclear power plants are composed of two or four units, and less frequently, six.

**Nuclear safety**
Nuclear safety comprises all technical, organizational and human arrangements which are intended to prevent the risks of incidents and to limit their effects and which are implemented at each stage of the life of a nuclear power plant, from design to operation and up to decommissioning.

**PCB**
Polychlorobiphenyls

**PCT**
Polychloroterphenyls

**Power Plant Availability**
Fraction of the available power on maximum theoretical power in taking into account only the technical unavailabilities. The availability rate is defined as the ratio between annual real or potential generation capacity with the maximum theoretical generation capacity being = installed capacity X 8,760 hours. The availability rate, which does not factor in technical losses, i.e., planned interruptions, unforeseen outages and test periods, characterizes the technical performance of a plant. For EDF's nuclear fleet in France, the maximum theoretical generation capacity is of 553 TWh (63.1 GW X 8,760 h).

**Profit at Risk (PaR)**
Regarding Edison, the Profit at Risk ("PaR") is, for a given confidence interval, the maximum decline of the expected value of a portfolio (MtM) on a yearly time horizon.

**Plutonium (Pu)**
Element with the atomic number of 94 (number of neutrons) of which no isotope (elements whose atoms possess the same number of electrons and protons – thus the same chemical properties – but a different number of neutrons) exists in nature. Plutonium 239, a fissile isotope, is produced in nuclear reactors from uranium 238.

**Radiation protection (Dosimetry – Dose)**

In a power plant, ionizing radiations sources are numerous: the fuel itself, the equipment activated by neutron flux (in particular those close to the core, such as tank or lid), particles from the primary circuit corrosion of reactors and carried by the primary fluid. The level of exposure of a person is quantified by the dose equivalent in sieverts (Sv). The total dose equivalents, called dosimetry and expressed in man-sieverts, is used as an indicator of dose received by all participating persons. The mobilization of ground players has allowed a continuous improvement of performance on the protection of employees against the effects of ionizing radiation.

**Remote Metering**

Remote metering of the quantity of electrical energy injected into or drawn from the network.

**Renewable Energies**

Energies whose use in generation does not involve the destruction of the initial resource. They are essentially derived from the elements, earth, water, air, fire and the sun. They include hydro, wind, solar and geothermal (energy derived from the heat below the earth's magma) energies as well as tidal and marine wave power and bio-mass (energy derived from living matter, particularly wood and organic waste). Energy resulting from household or industrial waste incineration is often included.

**Reprocessing**

Reactor burnt fuel reprocessing aimed at separating materials that can be recycled (uranium and plutonium) from final waste.

**RPD**

French public distribution network (*Réseaux Publics de Distribution*, or "RPD").

**RPT**

French public transmission network (*Réseaux Publics de Transport*, or "RPT").

**Series**

In the nuclear field, a series of plants means a set of nuclear plants with identical generation capacity. EDF's PWR reactor exists in three series: the 900 MW series (34 units of approximately 900 MW each), the 1,300 MW series (20 units) and the 1,500 MW series (four units).

**Storage**

Storage consists in placing packages of radioactive waste in a facility, ensuring their long-term management, i.e., under safe conditions allowing for long-term risk control.

**Storage Center**

Low- or medium-level short-lived radioactive waste, coming from nuclear plants, from The Hague or Centraco facilities, are sent to ANDRA's Soulaines storage center in the Aube region, which has been operational since 1992. This center has a capacity of 1,000,000 cubic meters and has enough capacity for approximately another 60 years. Very low-level short-lived radioactive waste is sent to ANDRA's Morvilliers storage center (also in the Aube region). This storage center was brought into service in October 2003 and has a further operating life of approximately 30 years.

**Therms (th)**

One therm is equivalent to 1,163 kWh or 4,186 million joules.

**Transmission Network**

Network which allows high and very high voltage electricity transmission from generation sites to distribution networks or industrial sites which have direct access. It includes the national grid, and interconnections (400,000 volts and 225,000 volts) and the regional dispatch networks (225,000 volts, 150,000 volts, 90,000 volts and 63,000 volts).

**Tritium ($^{3}H$)**

Hydrogen isotope, which emits beta rays, present in pressurised water reactor effluents.

**Ultracentrifugation**

This process involves very high speed spinning in a vacuum of a cylinder containing uranium hexafluoride ($UF_6$). Through the effect of the centrifugal force, the heavier molecules ($^{238}U$) aggregate at the periphery while the lighter ones ($^{235}U$) move towards the center, creating an isotopic separation effect.

**$UO_2$**

Natural uranium, fluorinated and then enriched. Uranium oxide, a particularly stable chemical form of uranium used as fissile material in fuel assemblies of pressurized water reactors.

**Upstream**

See "Fuel Cycle" and "Upstream Asset Portfolio".

# Glossary

**Upstream Asset Portfolio**

All assets guaranteeing the availability of electrical energy. These may be actual physical assets (such as power plants) or their contractual equivalent: long-term contracts, shareholdings, contracts giving the right to a proportional share of generated energy.

**Uranium (U)**

In its natural state, uranium is a mix containing three main isotopes (elements whose atoms have the same number of electrons and protons, thus the same chemical properties, but a different number of neutrons):
uranium 238, 99.3% fertile;
uranium 235, 0.7% fissile;
uranium 234.
Uranium 235 is the only natural fissile isotope, a quality which justifies its use as an energy source.

**URE (Re-enriched uranium)**

To be used in a reactor, reprocessed uranium (Uranium *de Retraitement*, or "URT"), even if containing more fissile uranium than in its natural state, must be further enriched. It is therefore called re-enriched uranium (Uranium *Réenrichi,* or "URE").

**URT (Reprocessed uranium)**

Reprocessed uranium (Uranium *de Retraitement, or "URT"), uranium derived from burnt fuel* reprocessing, differs from natural uranium as it contains slightly more uranium 235 and more uranium isotopes. It is recyclable and URT fuel assembly refueling is commonly used in reactors.

**VaR (Value at Risk)**

Financial indicator giving the statistical measure of potential maximum risk of loss of economic value (market value or mark to market) to a portfolio of cash flows in the event of unfavorable market movements over a certain period of time and a given confidence interval.

**Vitrification**

Process of immobilization in a glass structure of concentrated solutions of high-level waste through a mix at high temperature with glass paste.

**Waste**

The nuclear generation of 1 MWh of electricity (equivalent to the monthly consumption of two households) produces around 11 g of total waste across all categories.

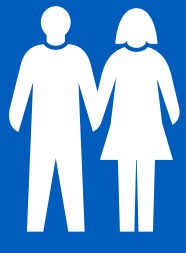
Short-lived waste represents more than 90% of the total, but contains only 0.1% of the radioactivity of waste. According to their level of radioactivity this sort of waste is subdivided into two different categories: very low-level waste and low-level waste.

Long-lived, medium- and high-level waste is only produced in smaller quantities – less than 10% of the total – but it contains most of the radioactivity (99.9%).

# Glossary

# Appendix A
# EDF GROUP

## 2009 Report by the Chairman of the EDF Board of Directors on Corporate Governance, internal control and risk management procedures



# Introduction

In application of article L. 225-37 of the French Code of Commerce (*Code de Commerce*), this report covers:

- the conditions of governance : preparation and organization of Board of Directors' meetings, tasking and functioning of the Board of Directors' Committees, information and training of Board directors, the corporate governance code, Shareholders' Meetings of Électricité de France SA ("EDF" or the "Company") (§ 1);
- as well as the internal control and risk management procedures implemented within the EDF group (§ 2).

For the purposes of this report "the EDF group" comprises:

- the EDF company;
- its subsidiaries in the regulated sector: RTE-EDF Transport and ERDF, respectively responsible for managing the energy transmission and distribution networks, for which the legal and regulatory framework (French law of August 9, 2004, amended by, notably, the law of December 7, 2006) provides for a specific management independence that limits the control over their activities: "the regulated subsidiaries";
- its other subsidiaries, direct or indirect, that are majority controlled, in France or internationally: "the controlled subsidiaries";
- its affiliates which are jointly controlled on a financial level, without exclusive operating control (EnBW, Edison, Constellation Energy Nuclear Group, Dalkia International, etc.): "the jointly-controlled affiliates";
- affiliates in which the Group has direct or indirect minority holdings: "the Shareholdings".

**Note 1:** the consolidation scope for the Group's consolidated financial statements is detailed in the notes to the consolidated financial statements ended December 31, 2009.

**Note 2:** the information specific to the three subsidiaries RTE-EDF Transport, EDF Énergies Nouvelles and Électricité de Strasbourg is available in the reports established pursuant to article L. 225-37 of the French Code of Commerce produced by these three companies. The practice and terms for exercising control may differ depending on the specific area of activity or the types of entity outlined above, and will be specified as necessary within this report.

With respect to the section describing internal control and risk management (§ 2), the structure of this report is based on the five chapters of the COSO [1] referencing system, and its contents are in line with the internal control recommendations from the French financial markets authority (*Autorité des Marchés Financiers* – AMF [2]). The description of the organization of internal control thus comprises the elements relating to the control environment (§ 2.1), the risk management strategy (§ 2.2), the communication and dissemination of information (§ 2.4), and the steering (§ 2.5) and control activities (§ 2.3), divided into four separate sections which correspond to the four internal control objectives specified in the AMF guidelines:

- internal control procedures relating to the implementation and optimization of operations (§ 2.3.1);
- internal control procedures relating to the establishment and treatment of accounting and financial information (§ 2.3.2);
- internal control procedures relating to compliance with laws and regulations (§ 2.3.3);
- internal control procedures relating to the implementation of instructions and orientations given by the Group's executive management (§ 2.3.4).

Finally, in addition to the changes in the internal control procedures outlined in this report, the last section reiterates the major overall orientations relating to the development of internal control within the EDF group (§ 3).

This report has been produced by a working group coordinated by the Corporate Audit Division, with contributions from experts in Legal Affairs, Corporate Risk Management and Accounting, and from the offices of the Secretary to the Board of Directors and the Chairman and CEO's office. Contributions were also sought from the Ethics and Compliance teams, the Information Systems Division, the Delegation of Board directors and Companies, the Sustainable Development Division and the Investor Relations Division. The report was approved by the Board of Directors meeting of February 10, 2010, pursuant to article L. 225-37 of the French Code of Commerce.

1. Committee of Sponsoring Organizations of the Treadway Commission.
2. Published January 22, 2007.

# 1 Corporate Governance

## 1.1 Functioning rules and organization of Board of Directors' meetings

### 1.1.1 Composition and powers of the Board of Directors

Pursuant to article 6 of the law relating to the democratization of the public sector of July 26, 1983, and the provisions of the amended decree-law of October 30, 1935 – the French state holding less than 90% of EDF's share capital – the Company's Board of Directors comprises 18 members, of whom one third are elected by the employees and two-thirds are appointed by the Shareholders' Meeting having been proposed by the Board of Directors, with the exception of the French state representatives appointed by decree. Their term of office is five years.

Until and including November 22, 2009, the Board of Directors comprised:
- six directors appointed by the Shareholders' Meeting: Mr Pierre Gadonneix, Chairman and CEO, Messrs. Frank Dangeard, Daniel Foundoulis, Bruno Lafont, Claude Moreau and Henri Proglio;
- six directors appointed by decree: Messrs. Pierre-Marie Abadie, André Aurengo, Bruno Bézard, Yannick d'Escatha, Philippe Josse and Pierre Sellal. The latter was appointed by decree on April 1, 2009, to replace Mr Gérard Errera;
- six directors elected by the employees: Mrs Marie-Catherine Daguerre, Messrs. Jacky Chorin, Alexandre Grillat, Philippe Pesteil, Jean-Paul Rignac and Maxime Villota.

Since November 23, 2009, the Board has comprised:
- six directors appointed by the Shareholders' Meeting of November 5, 2009: Mr Henri Proglio, Mrs Mireille Faugère, Messrs. Philippe Crouzet, Michael Jay, Bruno Lafont and Pierre Mariani;
- six directors appointed by decree on November 18, 2009: Messrs. Pierre-Marie Abadie, Bruno Bézard, Yannick d'Escatha, Philippe Josse, Pierre Sellal and Philippe Van de Maele;
- six directors elected by the employees on May 19, 2009: Mrs Christine Chabauty, Messrs. Alexandre Grillat, Philippe Maissa, Philippe Pesteil, Jean-Paul Rignac and Maxime Villota.

The mandates exercised by the corporate officers outside the Company are listed in section 1.18.7.1 of the EDF group Management Report.

In addition, the following attend Board meetings without the right to vote: the Head of the French State Economic and Financial Control Commission [1] to the Company and the Secretary of the Corporate Works Council.

The Board of Directors determines the orientations of the Company's activities and oversees their implementation. It deliberates on all the strategic, economic, financial or technological orientations concerning the Company as well as matters expressly entrusted to it by law or which it has reserved for itself.

Pursuant to internal regulation, the involvement of the Board of Directors is notably required on the following matters:
- internal and external growth operations or disposals which represent financial exposure for the Company in excess of € 200 million. This threshold is reduced to € 50 million for acquisitions which are not in line with the Company's strategic objectives;
- real estate transactions exceeding € 200 million;
- certain financial transactions, when their amount exceeds a predetermined value, subject each year to the Board's exceptional deliberation. In 2009, the Board set the following thresholds:
  - € 500 million as the total authorized amount in terms of sureties, endorsements or guarantees. The Chairman and CEO informs the Board of any operations of this type whose unit value is above € 100 million, agreed in the name of the Company or by a company controlled by the Company,
  - € 5 billion for the nominal unit value of certain financial transactions;
- contacts (supplies, works or services with or without financial commitment) involving amounts, including as necessary subsequent endorsements signed during the same year, equal to or exceeding € 200 million, or between € 100 million and € 200 million inclusive if these contracts relate to a new strategic orientation or a new business line for the Group;

1. Pursuant to the decree of May 26, 1955, this Commission exercises French State economic and financial control over EDF. It may exercise control procedures with a wide remit.

- long-term contracts for the purchase or sale of energy, $CO_2$ emission credits and quotas, by the Company or by a company that it exclusively controls, for annual volumes or amounts in excess of:
  - 10 TWh for electricity,
  - 20 TWh for gas (long-term contracts for the purchase or sale of gas above 5 TWh and below 20 TWh are also subject to detailed reporting to the Board of Directors' meeting following their signature),
  - € 250 million for coal and carbon dioxide;
- nuclear fuel cycle operations: particularly the strategies relating to the upstream and downstream operations in the nuclear fuel cycle;
- operations to transfer obligations relating to decommissioning or the downstream of the nuclear fuel cycle.

Furthermore, operations integral to the financing of the nuclear commitments must also be referred to the Board.

## 1.1.2 Appointment and powers of the Chairman of the Board of Directors and the Chief Officers

The Chairman of the Board of Directors assumes the function of Chief Executive Officer and is appointed by decree having been proposed by the Board of Directors to the President of the Republic.

Mr Pierre Gadonneix had been appointed Chairman and CEO by decree on February 15, 2006. His mandate expired on November 22, 2009.

Mr Henri Proglio was appointed Chairman and CEO of EDF by decree on November 25, 2009, having been proposed by the Board of Directors during its meeting of November 23, 2009.

The Chairman and CEO has full powers to commit the Company, subject to those attributed to the Board of Directors (see § 1.1.1).

Following recommendation by the Chairman and CEO and the majority of members present or represented, the Board of Directors may appoint up to five Chief Executive Officers. The extent of their powers and the duration of their terms of office are conferred on them by the Board of Directors in agreement with the Chairman and CEO. Until November 25, 2009, the Chairman and CEO was assisted by three Chief Executive Officers: Daniel Camus, Chief Financial Officer; Dominique Lagarde, Chief HR and Communications Officer; Jean-Louis Mathias, Chief Operating Officer, Integration and Deregulated Operations in France.

## 1.1.3 Activity of the Board of Directors during the 2009 financial year

In 2009, the Board of Directors reviewed and authorized, in addition to numerous matters linked to the Company's day-to-day activity, major subjects such as:

- the agreements with Centrica Group: the acquisition of a 20% minority holding in British Energy by Centrica and cooperation in new nuclear in the United Kingdom; the acquisition by EDF of Centrica's 100% holding in Segebel, a company which owns 51% of SPE (Belgium);
- the commitment to the process leading to the construction of an EPR reactor at the Penly site (76);
- the sale of EDF's remaining holding in Snet, within the framework of a generation capacity transaction between E.ON, EDF and EnBW;
- the legal proceedings between EDF and the European Commission relating to long-term contracts;
- the changes in the industrial partnership agreement between EDF and the Exeltium consortium signed on July 31, 2008;
- EDF's positioning for a consortium bid on an EPR project in the United Arab Emirates.

In addition, the Board of Directors notably reviewed:

- projects underway in the nuclear area: the stages in the process to acquire 49.99% of Constellation's (United States) nuclear assets; progress on the Flamanville EPR construction project;
- the memorandum of understanding between EDF and Gazprom and the launch of the process to evaluate the ownership options for EDF's electricity distribution networks in the United Kingdom;
- the Group's strategic referencing system as defined in 2007 in order to take into account a number of major events which have taken place since: the execution of a number of acquisition transactions (or projects) (British Energy, 49.99% of Constellation Energy Group's nuclear assets, Segebel/SPE), the impact of the global financial and economic crisis on the Group, and changes in the institutional and regulatory environment (the Climate-Energy Package adopted by the European authorities, legislation resulting from the French National Conference on the Environment (*Grenelle de l'Environnement*), the Champsaur Commission's report on the organization of the French electricity market).

## 1.1.4 Evaluation of the functioning of the Board of Directors

The Board of Directors met 12 times during 2009 and 26 Committee meetings were held to prepare for these meetings (see § 1.2).

The average attendance rate for Board directors at Board meetings was relatively stable in the 2005-2009 period (averaging 83.4%), and stood at 88.9% in 2009. Consistent with the guidelines on high standards of corporate governance (notably based on the AFEP-MEDEF Corporate Governance Code of December 2008) which recommend that the operations of the Board of Directors be evaluated, the Board's internal regulation stipulates that the ethics Committee "shall undertake an annual evaluation of the functioning of the Board of Directors (…) and propose areas requiring further consideration".

Furthermore, EDF has decided to entrust this evaluation to an external company every three years.

The evaluation of the functioning of the Board for 2009 was conducted by a questionnaire, which was first reviewed by the ethics Committee before being sent to all the Board directors on October 12, 2009. The answers were reviewed and analyzed, under the seal of anonymity, by the Secretary to the Board of Directors and were reported in a summary document examined by the ethics Committee and circulated to the Board of Directors. The results of this evaluation of the Board of Directors' operations for 2009 reflected a very positive change over the past five years. A very broad majority of the Board directors considered that the functioning of the Board of Directors is in line with the best corporate governance practices.

# 1.2 Missions and functioning of the Board of Directors' Committees

In order to carry out its duties, the Board of Directors is supported by a number of specialized Committees, tasked with reviewing and preparing specific reports prior to their submission to the full Board. These Committees are: the audit Committee, the Committee for monitoring nuclear commitments, the strategy Committee, the ethics Committee and the Appointments and Remuneration Committee. The Board directors who are members of these Committees are appointed by the Board of Directors.

## 1.2.1 Audit Committee

Ordinance no.2008-1278 of December 8, 2008, transposing into French law the European directive of May 17, 2006 on statutory auditors, notably prescribes the regulatory framework within which audit Committees perform the duties assigned to them. For EDF, these new duties are to be introduced from September 1, 2010.

The Committee regularly reviews reports from the statutory auditors, Executive Management, the Corporate Finance Division, the Senior Vice President, Corporate Audit, who is also responsible for coordinating Internal Control, and the Senior Vice President, Corporate Risk Management. Prior to their submission to the Board, the Committee reviews and comments on:

- the Company's financial situation;
- the Medium Term Plan and the budget;
- the draft financial reports established by the Corporate Finance Division (EDF company financial statements and the Group's consolidated financial statements and Management Report);
- the monitoring of the Company's risks (the Group's risk control strategy, in particular, is regularly examined by this Committee which also reviews, every half year, the Group's risk mapping and the methods for controlling risks);
- audit and internal control: organization, deployment and evaluation of the internal control procedures, half-year audit programs, the main findings and corrective measures resulting from them, monitoring of their implementation as well as the draft annual report of the Chairman of the Board of Directors on corporate governance, internal control and risk management procedures;
- the strategy on insurance;
- the choice of statutory auditors and the fees paid to them;
- the review of the financial aspects of external growth or disposal transactions which are particularly significant in nature (see § 1.1.1).

Until and including November 22, 2009, this Committee was chaired by Mr Dangeard, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members were Messrs. Bézard and d'Escatha, Board directors representing the French state, and Messrs, Chorin and Villota, Board directors elected by the employees.

Since November 23, 2009, the audit Committee has comprised Mr Mariani, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group, Messrs. Bézard and d'Escatha, Board directors representing the French state, and Messrs. Grillat, Pesteil and Villota, Board directors elected by the employees. Mr Mariani was appointed Chairman of the Committee by the Board of Directors during its meeting of January 21, having been proposed by the aforementioned Committee.

The audit Committee met seven times in 2009, including a meeting extended to the full Board of Directors devoted to the 2009 budget and the 2009-11 Medium Term Plan, and a joint meeting with the strategy Committee, also extended to the full Board, for a status report on the proposed new organization of the French electricity market resulting from the Champsaur Commission's report. The average attendance rate for Board directors was 82.9%.

During 2009, in addition to matters which fall within its traditional remit such as the review of the annual and half-year financial statements, the mapping of risks and audits, this Committee reviewed the impact of the economic and financial crisis, the perception by the markets of the EDF group, the counterparty risks strategy, the strategy on insurance, major issues affecting financial stability in France and the financial issues involved in nuclear development in the target countries and those linked to the extension in the lifespan of the French nuclear fleet. It also reviewed the report, by the auditor tasked to this effect, on the external audit realized on the deployment of the internal control policy within the Group.

## 1.2.2 Committee for monitoring nuclear commitments

The Committee for monitoring nuclear commitments (*Comité de suivi des engagements nucléaires* – CSEN) is tasked with monitoring changes in nuclear provisions, commenting on governance issues relating to the dedicated assets, on the rules for the association of assets and liabilities and on strategic allocation, and ensuring the compliance of the dedicated assets management implemented by EDF in the context of the policy for constituting and managing the dedicated assets. To this end, it may call on the support of the Nuclear Commitments Financial Expertise Committee (*Comité d'Expertise Financière des Engagements Nucléaires* – CEFEN) which comprises five independent experts and whose mission is to assist the Company and its governance bodies in such matters.

Until and including November 22, 2009, the Committee for monitoring nuclear commitments was chaired by Mr Dangeard, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members were Messrs. Abadie and d'Escatha, Board directors representing the French state and Messrs. Chorin and Villota, Board directors elected by the employees.

Since November 23, 2009, this Committee has comprised Mr Crouzet, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the Group, Messrs. Abadie and d'Escatha, Board directors representing the French state and Messrs. Pesteil and Villota, Board directors elected by the employees. The Chairman of this Committee will be appointed by the Board of Directors in 2010, having been proposed by the Committee.

This Committee met three times in 2009, with an average Board director attendance rate of 100%.

During 2009, this Committee examined, in particular, the summary report of the work of the Nuclear Commitments Financial Expertise Committee. It monitored the impact of the economic and financial crisis on the manage-

ment of the dedicated assets portfolio, examined the scenarios for reversing cash contributions to the dedicated assets which had been suspended in September 2008 due to the economic and financial crisis, studied scenarios for asset transfers to the dedicated asset portfolio and examined the optimum equities-bonds strategic allocation in the current context.

## 1.2.3 Strategy Committee

The strategy Committee comments to the Board of Directors on the Company's major strategic orientations and, specifically, the strategic referencing system, the industrial and sales and marketing strategy, the Public Service Agreement, strategic agreements, alliances and partnerships, research and development strategy, and internal and external growth projects or disposals requiring approval from the Board of Directors.

Until and including November 22, 2009, the Committee was chaired by Mr Proglio, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members were Messrs. Abadie, Bézard and Sellal, Board directors representing the French state and Mrs Daguerre, Messrs. Grillat and Pesteil, Board directors elected by the employees.

Since November 23, 2009, this Committee has comprised Mr Proglio, Chairman and CEO, Mr Jay, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the Group, Messrs. Abadie, Bézard and Sellal, Board directors representing the French state and Messrs. Grillat, Pesteil and Rignac, Board directors elected by the employees. The Chairman of this Committee will be appointed by the Board of Directors in 2010, having been proposed by the Committee.

The strategy Committee met three times in 2009, including one meeting held jointly with the ethics Committee, which reviewed EDF SA's sustainable development strategy and another meeting with the audit Committee, extended to the whole Board of Directors, to review the proposed reorganization of the French electricity market. It also reviewed the strategies regarding the upstream and downstream of the nuclear fuel cycle.

The average attendance rate of Board directors was 81%.

## 1.2.4 Ethics Committee

The ethics Committee ensures that ethical considerations are taken into account in the work of the Board of Directors and in the management of the Company. It reviews the annual report excluding the financial statements (corporate and sustainable development reports), the report from the Ethics and Compliance Advisor, as well as the reports from the Mediator, the Senior Vice President, Nuclear Safety and Radioprotection, the Head of Hydro Safety and the Senior Vice President, Regulated Activities Governance.

Furthermore, the ethics Committee conducts an annual evaluation of the functioning of the Board of Directors and the application of its internal regulation, and suggests areas for further consideration.

Until November 22, 2009, the Committee was chaired by Mr Aurengo, a Board director representing the French State. The other members were Messrs. Foundoulis and Moreau, Board directors appointed by the Shareholders' Meeting and Messrs. Chorin, Pesteil and Rignac, Board directors elected by the employees.

Since November 23, 2009, this Committee has comprised Mrs Faugère, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the Group, Mr Van de Maele, a Board director representing the French State and Mrs Chabauty, Messrs. Maissa and Pesteil, Board directors elected by the employees. On December 8, 2009, Mr Grillat was also appointed a member of this Committee. The Chairman of this Committee will be appointed by the Board of Directors in 2010, having been proposed by the Committee.

The ethics Committee met eight times in 2009, with the average attendance rate for Board directors at 100%.

During 2009, this Committee examined, in particular, the Group's Human Resources master plan for the 2009-11 period, the worldwide agreement on Group Corporate Social Responsibility, the health in the workplace policy, the implementation of the "Swine Flu Pandemic" plan, skills renewal in nuclear, the communication strategy as well as the results of the evaluation of Board of Directors' operations in respect of 2008 and 2009.

This Committee also made two trips in 2009: one to Laos jointly with EDF's Medical Advisory Board within the framework of the construction of the hydroelectric facility on the Nam Theun river, the other to the Nogent-sur-Seine (77) nuclear plant within the framework of the ongoing visits organized annually since 2004 in order to understand the issues surrounding EDF's subcontracting policy in nuclear.

## 1.2.5 Appointments and Remuneration Committee

The Appointments and Remuneration Committee submits proposals to the Board of Directors regarding the appointment of Board directors by the Shareholders' Meeting. It submits for approval, to the Minister responsible for the economy and finance and the Minister responsible for energy, its comments on the compensation of the Chairman and CEO regarding the salary, variable portion (including the target criteria as well as its opinion of the results achieved by the Chairman and CEO relative to the objectives set) and his peripheral compensation. It also communicates this opinion to the Board of Directors for deliberation and the setting of this compensation.

The Committee examines the compensation of the chief officers and comments on the proposals submitted to it by the Chairman and CEO with regard to the salary, variable portion (including the target criteria as well as its opinion of the results achieved by each chief officer relative to the objectives set) and their peripheral compensation. It submits its proposals and opinion for approval to the Minister responsible for the economy and finance and to the Minister responsible for energy and also communicates this to the Board of Directors. The Board of Directors deliberates and sets the salary, objectives and peripheral compensation of the Chief Executive Officers.

The Committee comments to the Board of Directors on the conditions for establishing the compensation of the main senior executives (fixed and variable portion, calculation method and indexing), as well as on the amount and conditions of Board directors' fees. It ensures the existence of succession plan charts for Executive Committee positions.

Information relating to the compensation of corporate officers including Board directors' fees can be found in section 1.18.7.2 of the EDF Management Report.

Until and including November 22, 2009, the Committee was chaired by Mr Lafont, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group. The other members were Mr Dangeard, a Board director appointed by the Shareholders' Meeting and a respected figure from outside the EDF group and Mr Bézard, a Board director representing the French State. Mr Lafont was appointed Chairman of the Committee by the Board of Directors during its meeting of January 21, having been proposed by the aforementioned Committee.

Since November 23, 2009, the Appointments and Remuneration Committee has comprised Messrs. Jay and Lafont, Board directors appointed by the Shareholders' Meeting and respected figures from outside the EDF group and Mr Bézard, a Board director representing the French State.

The Appointments and Remuneration Committee met five times in 2009. The average attendance rate for Board directors was 86.7%.

During 2009, the Committee notably reviewed the 2008 bonuses of the Chairman and CEO and the Chief Executive Officers, commented on their compensation in respect of 2009 and set the criteria for calculating the 2009 bonuses. It also reviewed the profiles of the six Board directors, whose proposed appointment was submitted for approval to the Shareholders' Meeting of November 5.

## 1.3 Information and training for Board directors

At each Board of Directors' meeting, the Chairman and CEO brings to the attention of board members the main facts and significant events arising in the Company between Board of Directors meetings.

The Secretary to the Board of Directors also communicates information to Board directors, which they may supplement by meeting with the main senior executives of the Company and the Group. They communicate requests for specific information to the Secretary to the Board.

In addition, the Secretary to the Board of Directors organizes information meetings on complex matters and those of major strategic importance or on subjects requested by Board directors, together with any training from which the latter wish to benefit.

## 1.4 Corporate Governance Code

Having reviewed the AFEP-MEDEF recommendations of October 2008, cited in the Council of Ministers' communication of October 7, 2008, on the compensation of corporate officers and at the proposal of the Appointments and Remuneration Committee, the Board of Directors' meeting of December 17, 2008, expressed its agreement on these recommendations. The Board considered that these recommendations were consistent with the EDF corporate governance approach that had long been in existence and noted that the recommendations applicable to the Company had already been implemented.

Subject to the legislative and regulatory specificities applicable to it, these recommendations are an integral part of the AFEP-MEDEF Corporate Governance Code of December 2008 to which the Company will refer, pursuant to article L. 225-37 of the French Code of Commerce.

## 1.5 Shareholders' Meetings

The conditions relating to shareholder participation in the Shareholders' Meeting are found in article 20 of the Company's by-laws, and are outlined in section 21.2.6 of the EDF *Document de Référence*.

Furthermore, the information foreseen by article L. 225-100-3 of the French Code of Commerce is published in the Company's annual financial report.

# 2 EDF group internal control

The aim of this document is not to be an exhaustive presentation of all the control procedures existing within the Group's companies; rather it focuses on those related to activities or risks deemed to be significant, as well as on the main long-term procedures in effect in 2009, highlighting any changes and the key initiatives developed during that year.

## 2.1 Control environment

### 2.1.1 Steering bodies of executive management

The operations of the steering bodies until November 22, 2009 were organized to fulfill two major priorities: improve functioning as an integrated Group while respecting the management autonomy of the regulated subsidiaries and involve operating teams in the decision-making process.

The Top 4, comprising the Chairman and CEO and the three Chief Executive Officers, was the decision-making body of the executive management. The Executive Committee, the forum for strategic discussion and consultation on all cross-functional and cross-divisional matters, comprised the members of the Top 4, the Senior Executive Vice Presidents, the Corporate Secretary and the CEOs of EDF Energy, EnBW and Edison.

A limited number of specific decision-making Committees supported the work of the Top 4: the Coordination Committee France, the Commitments and Shareholdings Committee, including an *ad hoc* form to handle fuels alone (CEP-fuel Committee), the Senior Executive Management Committee, the Nuclear Safety Advisory Board, the Upstream-Downstream Trading Committee and the International Nuclear Board. In addition, *ad hoc* Committees or boards were convened to handle strategic issues of a temporary nature such as, for example, the project to integrate British Energy within the Group.

The decision of March 14, 2008 also specified the conditions for governance by EDF of its two subsidiaries in the regulated sector (RTE and ERDF) given the regulatory obligations specific to these activities. A Regulated Assets Committee comprising, notably, the Top 4, the Chairmen of the Supervisory Boards of RTE and ERDF together with the Senior Vice President, Regulated Activities Governance, was created in order to ensure the protection of EDF's interests as an investor in the regulated sector while guaranteeing the management independence of the subsidiaries concerned.

The operating governance procedures post-appointment of the new executive management will be defined over the coming weeks and will be the subject of a detailed presentation in the next Chairman's report.

### 2.1.2 Internal control policy

The roll-out of the internal audit and control policy, signed by the Chairman on March 7, 2006, was pursued in all Group companies, having been adapted for specific circumstances within the entities, and in extending its scope and level of depth throughout 2009.

This policy, which was designed to provide a reasonable assurance of control over EDF's risks refers to the COSO in that it is based on four complementary principles:

- management responsibility: each executive is responsible for the implementation and functioning of a procedure enabling them to control their area of responsibility and verify that areas that have been sub-delegated are also controlled;
- reporting obligation: the senior executives provide an annual account of their internal control procedures *via* a report outlining and self-assessing the procedure in place;
- systematic audit: every three years or so, the procedures of each entity are the subject of an "independent" audit;
- ongoing progress which is ensured by the "link" between self-assessment and audit.

These four key principles apply to all the Group's entities but with implementation conditions that may vary depending on the entities concerned (size, governance conditions and level of control).

**Concerning the controlled entities and subsidiaries (excluding the regulated subsidiaries)**, the application scope corresponds to EDF SA's main branches (which themselves often control several operating units or subsidiaries and affiliates known as the "second circle") and the controlled subsidiaries reporting directly to the executive management (known as the "first circle").

Each executive concerned has appointed an "Internal Control Coordinator", and the coordination of this network is ensured by the Corporate Audit Division (professional standards, regular meetings, establishment of control and self-assessment referencing systems, background documents shared on the intranet, etc.).

An internal control manual has been established and is offered to each entity to help implement its own internal control procedures. This guide, based on the COSO chapters, characterizes the risk areas concerned, identifies the main aims of internal control to be explored and suggests the best practices to be implemented. It is updated annually in the light of lessons learnt and new control requirements such as, for example, new internal policies.

At the end of 2009, each of the 36 entities concerned produced a third annual report on internal control outlining, notably, their internal control procedures, a self-assessment of these procedures, the commitment of the head of the entity as to his or her aims and an account of the measures envisaged to achieve these aims. At the end of 2009, based on these management self-assessments, it appeared that the deployment of the internal audit and control policy had been more than 90% achieved.

In line with the commitments made, since 2008, around two-thirds of the internal control systems in the entities have been audited by the Corporate Audit Division, which will pursue this approach in order to audit all the entities concerned in 2010. These audits confirmed the satisfactory deployment of the internal audit and control policy principles over the audited scope together with, in virtually all cases, a good level of reliability on the self-assessments, which supports the level of assurance resulting from the self-assessment reports. The areas for improvement identified during these audits are the subject of recommendations formulated by the Corporate Audit Division and action plans established by management. Their implementation is being monitored by the Corporate Audit Division.

As of 2007, the functional entities established control objectives relating to the application of major policies within their areas of responsibility. These objectives, approved by the Top 4 in October 2007, have been included in the internal control reference guide and applied by the operating entities pursuant to the internal audit and control policy. These elements are reviewed every year and adjusted as necessary to take into account any changes underway. In 2009, new control objectives were included relating, for example, to energy market risks.

Furthermore, any significant suspicion of process malfunctioning or failure in internal control leads to the implementation of a specific audit mission, whether this be within the framework proposed by the Corporate Audit Division or at the request of the management (snap audit) and the implementation of the corresponding action plans.

**Concerning the other subsidiaries and affiliates of the Group (regulated subsidiaries, jointly-controlled affiliates and significant shareholdings)**, the Chairman's decision of September 22, 2008, aimed at strengthening the risk control in all the Group's subsidiaries and affiliates *via* the explicit tasking of Board directors representing EDF within governance bodies, was gradually implemented. This decision aims at ensuring for each subsidiary and affiliate the implementation of risk mapping, a description of the internal audit and control system, regular information on the risk mapping and audit activities (program and main results) together with the verification of the effectiveness and the relevance of each of these systems by an independent audit every three years. This implementation was executed under the overall responsibility of the Corporate Audit and Corporate Risk Management Divisions, each for its own area. It was accompanied by technical support from these two divisions for:

- the "EDF" Board directors in the fifteen or so called "first circle" subsidiaries and affiliates, to help them to implement and steer the approach within the governance bodies;
- the heads of the branches and divisions to which they report, who are tasked with providing the same level of support to the Board directors of those 'second circle' subsidiaries and affiliates in their area of responsibility, and reporting back on this in their annual self-assessment reports.

A range of tools to help Board directors has been established by the Corporate Audit Division: a set of guidelines for the attention of Board directors, specifying the technical elements useful to the effective implementation of the decision of September 22, 2008, mentioned above, a specific terms of reference for conducting the three-yearly external audit of the internal control and risk management procedures required by the internal audit and control policy. Note, more specifically, that the two main jointly-controlled international affiliates (EnBW and Edison) continued the deployment of their own internal control systems consistent with the transposition into their respective national laws of the European directives 2006/43 and 2006/46. Regular discussions took place between the two major affiliates and the Corporate Audit Division aimed at sharing the tools, referencing systems and experience acquired within EDF since 2006, and planning the changes to be implemented with regard to the transposition of the 4th, 7th and 8th European directives.

The regulated subsidiaries (RTE and ERDF) also deploy their own internal control procedures and report back on this through their governance bodies.

Lastly, an inventory audit of the internal control procedures was carried out following the acquisition of British Energy in order to help with its integration into EDF Energy in terms of risk control and internal control.

## 2.1.3 Internal control steering Divisions

### 2.1.3.1 CORPORATE FINANCE DIVISION

The Corporate Finance Division maintains a watching brief on market developments and financial techniques and analyzes the financial risks associated with projects. In 2009, the Chief Financial Officer chaired the Commitments and Shareholdings Committee (see 2.3.1.2.1).

Within Corporate Finance, Group Controlling:
**Management Control** is responsible for:

- steering the forecasting processes of the Group's [1] management cycle (budgets and Medium Term Plans based on the Industrial Project), summarizing the main results and arbitrating between conflicting claims at branch, division and Group level. It acts as an alert, analysis and recommendation mechanism, prior to a decision being taken, by notifying the parties concerned of its analysis of the financial consequences of the operations envisaged or the performance levels proposed;
- helping operating management to steer performance: the tracking of budget execution (involving re-forecasting four times a year) and operating results is ensured through regular broad-based performance reviews across all branches and divisions and the controlled subsidiaries;
- acting as Group financial controller, notably by participating in investment monitoring and conducting analysis to ensure economic and financial optimization.

1. The scope of the Group's management cycle is that of the consolidated financial statements and is detailed in the notes to the consolidated financial statements.

Management Control is embedded at the level of each management entity. The controllers are members of the Management Committees of the entities to which they belong. In 2009, the Heads of Financial Management in the branches and divisions were appointed and evaluated under the responsibility of the Chief Financial Officer.

**Accounting** is responsible for:

- defining a consistent framework for the accounting information system which complies with the standards in force and for keeping a watching brief on any changes;
- controlling the quality of the accounting in specifying the Group's accounting referencing system which enables the appropriate accounting treatment and the correct accounting input from the upstream processes;
- the annual updating, for EDF, of the internal control referencing systems, assessing the accounting quality implemented by process and organizing feedback on implementation by the entities of the control procedures stipulated in the accounting and financial area (see § 2.3.2.3).

Additionally, concerning the subsidiaries and affiliates, the accounting internal control policies are the responsibility of each legal structure concerned.

### 2.1.3.2 CORPORATE RISK MANAGEMENT DIVISION

For many years the EDF group has implemented a strategy for managing its operating, financial and organizational risk.

Faced with an evolving context, EDF decided, as of 2003, to establish an overall process for managing and controlling its risks to strengthen the existing procedures, notably by creating the Corporate Risk Management Division. The Corporate Risk Management Division is specifically responsible for:

- deploying the risk mapping process, either directly for the EDF scope and that of the controlled subsidiaries, or through the governance bodies of the regulated subsidiaries and jointly-controlled affiliates, and establishing and updating the consolidated risk mapping of the Group's major risks (see § 2.2);
- alerting the Chairman and CEO and the corporate management as to emerging risks or those which have not been adequately identified;
- consolidating and updating the risk control strategy, either directly within the EDF scope and that of the controlled subsidiaries, or through the governance bodies of the regulated subsidiaries and jointly-controlled affiliates (see § 2.2), notably by ensuring the comprehensiveness and consistency of the various sector risk control strategies (see § 2.3.1.1);
- ensuring the deployment of the energy market risk strategy within the EDF scope and that of the controlled subsidiaries and, more generally, ensuring the control of these energy market risks either directly within the EDF scope and that of the controlled subsidiaries, or through the governance bodies of the regulated subsidiaries and jointly-controlled affiliates (see § 2.3.1.1.1);
- defining, implementing and consolidating a financial risk control strategy (interest and currency exchange rates, liquidity, equities and counterparty) for the EDF scope and that of the controlled subsidiaries and ensuring the control of these financial risks through the governance bodies of the regulated subsidiaries and jointly-controlled affiliates (see § 2.3.1.1.2);
- managing the comprehensiveness and relevance of the risk analysis conducted on projects involving investment and long-term commitments and submitted to corporate management for approval;
- updating the strategy on crisis management for the EDF scope and that of the controlled subsidiaries, and defining the terms of cooperation with the regulated subsidiaries and, *via* the branches or divisions to which they report, with the jointly-controlled affiliates during periods of crisis (see § 2.2);
- ensuring the steering of the economic intelligence activities for the Group and, notably, the control of all the suppliers and sensitive contracts within the EDF scope in liaison with Purchasing and the business branches concerned.

### 2.1.3.3 GROUP AUDIT FUNCTION

The Group's audit function comprises all the Group's audit resources involved in internal audit at Group, parent company and subsidiary and affiliate level. The Chairman and CEO has entrusted the coordination of this function to the Senior Vice President, Corporate Audit Division. It is organized around the Corporate Audit Division and dedicated "operating" audit teams: "business line" audit teams (in the generation and customer areas at EDF) and audit teams specific to each of the main French and international subsidiaries and affiliates (RTE, ERDF, EDF Energy and EDF Trading, EnBW, Edison).

The Corporate Audit Division is responsible for controlling the internal control systems of EDF and its controlled subsidiaries, including the auditing of the corresponding dedicated audit teams. The Corporate Audit Division also carries out cross-divisional audits or those of "corporate" importance for the Group over the same scope and, as necessary, outside this scope while respecting the regulatory and governance constraints [1]. Lastly, the Corporate Audit Division ensures the effective implementation of the decision of September 22, 2008, in terms of the audit function of the regulated subsidiaries and jointly-controlled affiliates (see above).

The Corporate Audit Division ensures the operating coordination of the entire function (sharing of best practices, initiatives to raise professional standards, upgrading of tools and methods, etc.).

#### QUALIFICATION STANDARDS FOR EDF SA AND THE CONTROLLED SUBSIDIARIES:

- the Corporate Audit Division applies international standards as defined by "The Institute of Internal Auditors" and ensures their promotion, as well as control within the accessible scope (see above);
- the duties, powers and responsibilities of the auditors, as well as the rights and duties of the audited entities, are defined in a charter which was updated on March 7, 2007, to coincide with the adoption of the new internal audit and control policy. This charter reiterates the independence of the audit function and its direct reporting line in to the Chairman and CEO, the missions and commitments of internal audit, the duties and the powers of the auditors and of the audited entities;
- the Senior Vice President, Corporate Audit, reports directly to the Chairman and CEO;
- all the auditors in the Corporate Audit Division and the Audit departments of EDF SA and the controlled subsidiaries (excluding the regulated subsidiaries) are trained to use the same methodology, consistent with international standards. They are recruited from EDF's different businesses, as well as from external audit firms. Each auditor is evaluated at the end of each mission and a transfer to audit is considered as a positive career move. A protocol agreement was signed to this effect in March 2006 between the Corporate Audit Division and the Senior Executive Development Division;

1. According to case by case agreements *via* the governance bodies of the non-controlled affiliates and regulated subsidiaries

- following the implementation of an audit function for the controlled scope, the total number of auditors including the auditors in the business branches (generation, customers, EDF Energy and EDF Trading) and the corporate auditors is 0.95 auditors per 1,000 employees [1] and 1.49 auditors per billion Euros of turnover, compared with an industry average of 0.56 auditors for 1,000 employees and 2.46 auditors per billion Euros of turnover;
- the key processes essential to the proper functioning of the Corporate Audit Division over the chain of activities (from the drawing up of audit programs to the monitoring of the implementation of recommendations) are detailed in the form of quality plans which are regularly reviewed.

In 2008, an independent evaluation was conducted on the functioning of the operating processes and the quality of the audits conducted by the Corporate Audit Division together with how comprehensively and appropriately the AMF guidelines have been reflected in the definition of and deployment process for the Group's new internal audit and control policy. This evaluation confirmed the relevance of the work undertaken and the resources deployed. It also proposed a number of improvements which are the subject of an action plan currently in the deployment phase.

### STANDARDS OF FUNCTIONING WITH REGARD TO EDF SA AND THE CONTROLLED SUBSIDIARIES:

- the Corporate Audit Division coordinates the deployment of the internal control policy and the internal control function, ensures the control of the internal control procedures in the various branches and divisions and controlled subsidiaries and conducts both cross-divisional and corporate-level audits;
- the half-year audit program is decided by the Chairman and CEO and then submitted to the audit Committee, which reports back to the Board of Directors. It is established, taking into account:
  - the Group's internal control policy (missions to audit the internal control procedures of entities within the controlled scope),
  - the risks identified in the Group's risk mapping,
  - the monitoring of the implementation of decisions taken by the executive management,
  - major projects and the principal corporate processes,
  - requests from branch or division management, excluding the snap audits requested during the execution of the program,
  - possible audits of the second line controlled subsidiaries, carried out on behalf of the branches and divisions responsible for them (for example, International Operations and Group Synergies Division),
  - possible joint audits with EnBW for the scope of this structure, as well as with Veolia Environnement for the Dalkia International scope, and "corporate" audits conducted within the scope of EDF Energy and EDF Trading.

  The program of the business line audit teams is coordinated with that of the Corporate Audit Division, which has a "pre-emption right" for the implementation of business line audits resulting from a risk at corporate level;
- all audits give rise to recommendations which, after being approved by the audited entities and their management, form the basis for action plans on their part, which are submitted for approval to the Corporate Audit Division. During the year following the audit, the Corporate Audit Division monitors the progress on the implementation of these corrective actions, the audit considered to have reached a satisfactory conclusion only when these measures have been fully implemented. An unsatisfactory conclusion to an audit or one where reservations are expressed triggers an appropriate management alert;
- a half-year summary report is established by the Corporate Audit Division, recapitulating the main audit findings and the corresponding corrective management action, as well as the results of audit exercises concluded during the period. It also identifies possible recurring or generic problems appearing over the course of several audits conducted during the period which are worthy of the particular attention of the executive management. This report is presented first to the Chairman and CEO, then to the audit Committee.

Once a year, this report also presents a summary of the self-assessments of the various entities on the level of deployment of the internal control policy within the Group (including the implementation of the decision of September 22, 2008, as regards the regulated subsidiaries and jointly-controlled affiliates).

### 2.1.3.4 LEGAL AFFAIRS DIVISION

In order to remain as close as possible to the decision-making bodies, whether at executive management, branch, division or regional level, the organizational structure of the Legal Affairs Division is based on that of EDF. Legal Affairs is consulted whenever contracts have to be drawn up and the legal risks relating to corporate projects have to be analyzed. It also ensures the centralized monitoring of major litigation. All of its activities enable it to fulfill an alert function and to play a role in avoiding litigation.

Further to a decision taken by the Chairman and CEO in May 2007, Legal Affairs is overseeing the deployment of a contract database aimed at centralizing all of EDF's major contractual commitments and those of a number of subsidiaries and affiliates (excluding the regulated subsidiaries and jointly-controlled affiliates). The operating deployment phase was completed in 2009 as regards EDF and continued in respect of the aforementioned subsidiaries and affiliates.

## 2.1.4 Delegations of powers and technical authorizations

The Chairman and CEO delegates certain powers granted to him by the Board of Directors to his immediate associates. Since June 2003, the delegations of powers have enabled increased control over procurement, with only the Senior Vice President, Purchasing, able to sign off on purchasing contracts subject to the powers of the Board of Directors in this matter (see § 1.1.1).

The powers of the "nuclear energy operator" have been delegated to the Senior Executive Vice President, Generation, who, in turn, delegates to the Senior Vice Presidents in charge of Nuclear Operations and Nuclear Engineering.

Each facility head, subject to prior evaluation of the appropriate skills, issues the technical authorizations allowing individuals to work in the facilities (power plants, electricity transmission networks, etc.). These requirements apply to all workers, be they employees of EDF or external service providers.

During 2007, Legal Affairs formulated a number of recommendations regarding the existing delegations; the signature process relating to these new delegations was thus initiated in 2007, and pursued in 2008 before being virtually completed in 2009. Furthermore, a set of guidelines on the delegation of powers and responsibilities was circulated in November 2008 in order

1. Source benchmark club of internal audit departments: result of the study on internal audit practice in France in 2009 published on December 13, 2009.

to ensure that the EDF entities were better informed as to the nature, consequences and management rules applying to delegations of power. Given the recent organizational changes, for the delegations of powers are currently being updated. Furthermore, the management process of the delegations of powers was reviewed in 2009 to notably improve their production periods. This project will continue in 2010 with the implementation of a dedicated information system.

## 2.1.5 Group ethics and environmental quality

### 2.1.5.1 GROUP ETHICS

Group ethics, based on a decision taken by the Chairman and CEO on March 15, 2007, are supported by a reference document, the Ethics Handbook.

Grounded in the Group's five corporate values (respect for individuals, environmental responsibility, striving for excellence, a commitment to the community, the necessity of integrity), it sets out for EDF the principles governing collective action and individual conduct.

The document was circulated within all EDF branches and divisions during the 2007 fourth quarter and individual copies are handed to each employee by their line managers to help insure individual and collective buy-in. The appointment of ethics coordinators in each branch and division, then gradually in each unit, to be responsible for helping the executives appointing them to promote the Handbook and encourage respect of the corporate values in the field, strengthens the existing ethics procedure.

EDF's corporate values serve as guidelines for the ethical procedures in the subsidiaries and affiliates, for codes of conduct developed in the business lines and certain areas, as well as for fundamental processes such as recruitment (recruitment referencing system), training (employee awareness initiatives), relations with suppliers and subcontractors (supplier charter, employee agreement on subcontracting) and individual and collective performance reviews (individual appraisal, bonus criteria).

In 2008, the creation of a Group Sustainable Development Committee comprising the sustainable development executives in the different subsidiaries and affiliates such as EDF Energy, Demasz, the Polish subsidiaries, EnBW and Edison enabled the harmonization of the ethical approaches.

The ethical alert procedure, established since 2004 within the EDF scope, recognizes every employee's right, and that of every external partner, to question the company, confidentially but not anonymously, on the manner in which the company respects its ethical commitments, in terms of both its actions and the behavior of its employees. Consultation with the Ethics Advisor takes place, for the most part, through a secure ethical messaging system. Furthermore, since 2008, within the framework of the strengthening of the ethical approach, a free, anonymous toll-free number has been available, enabling each employee to report any work-related difficulties encountered during his or her professional life to external counselors qualified in psychology.

A report on the activity of the Ethics Advisor, both in terms of the deployment of the ethics approach and the functioning of the ethical alert procedure, is presented annually to the ethics Committee of the Board of Directors. In 2010, the report on the ethical approach within EDF and the Group will be included in the corporate social responsibility management review.

### 2.1.5.2 ENVIRONMENTAL QUALITY PROCESS

In 2009, the EDF group introduced a Sustainable Development strategy, formalized in a document containing a series of shared commitments which was signed by 15 senior executives from the Group's principal companies. These commitments facilitate consistency between the initiatives of these companies focused on three priorities:

- climate change and biodiversity;
- access to energy and proximity to users;
- contributing to the debate on sustainable development.

The implementation of these commitments is coordinated by the Sustainable Development Committee, a Group governance body established in 2008.

This Committee serves as an Environment Board at Group level, in charge of steering the Environmental Management System in line with the ISO 14001 standard.

The "EDF group" has effectively had ISO 14001 certification since April 9, 2002. In this instance, the certification covers the scope comprising EDF (all its operating entities), a number of French subsidiaries and affiliates (including the regulated subsidiaries RTE-EDF Transport and ERDF) as well as some international subsidiaries and affiliates, including EDF Energy. EnBW and Edison are also ISO 14001 certified (but not currently within the Group certification scope). The certification was renewed for the first time in 2005 and a second renewal was announced in 2008 by the independent certification body DNV.

The processes implemented within the framework of this certification contribute to strengthening control of the Group's environmental risks.

## 2.1.6 Organization and steering of information systems (IS)

Contracting ownership responsibilities are fulfilled by each of the branches and divisions for their scope while project implementation responsibilities are shared between these branches and divisions, as a function of their orientations, and the IT and Telecommunications Shared Services Center of the Shared Services Division which plays a role as cross-functional operator for EDF and the subsidiaries, notably the regulated subsidiaries.

Overall consistency is managed by the Group Information Systems Division, which coordinates Group Information Systems through common policies, Information System governance being ensured at two levels in the organization:

- strategic decisions and arbitrages are submitted, depending on their nature and the scope concerned, to one of EDF's decision-making Committees (see § 2.1.1);
- other important decisions are taken by a Committee of the Heads of Information Systems representing the branches and divisions.

## 2.1.7 External controls

Like all listed companies, EDF is subject to the scrutiny of the French financial markets authority (*Autorité des Marchés Financiers* – AMF). In that it is majority controlled by the French State, EDF is also subject to control by the French public accounting institution (*Cour des Comptes*), the State controllers, the Inspectorate of Public Finances, the Commissions for Economic Affairs of the French National Assembly and Senate and the Markets Commission.

Pursuant to French law, the statutory auditors certify the annual financial statements (EDF parent company and consolidated), carry out a limited review of the Group's summary consolidated half-year financial statements and comment on the annual report from the Chairman of the Board of Directors established pursuant to article L. 225-37.

Owing to the nature of its business activities, EDF is also subject to control by the French Energy Regulation Commission (*Commission de Régulation de l'Énergie* – CRE) and by the French Government department responsible for nuclear safety and radioprotection (*Direction Générale de la Sûreté Nucléaire et de la Radioprotection*).

The findings of these different external review bodies feed into the Group's internal control and audit programs.

## 2.2 Risk management and control policy

The objectives of the risk management and control policy are to:

- enable the identification and ranking of risks in all areas in order to ensure their increasingly effective control, under the responsibility of the operating management;
- ensure that senior executives and governance bodies within EDF have an aggregated and regularly updated picture of the major risks and their level of control;
- contribute to securing the Group's strategic and financial trajectory;
- meet the expectations of external stakeholders and inform them of the Group's risks and the procedures for managing these risks.

As a general rule, the operating and functional entities are responsible for managing the risks which fall within their scope of activity.

The Group's risk control policy is implemented either directly for the EDF scope and that of its controlled subsidiaries or *via* the governance bodies for the regulated subsidiaries and jointly-controlled affiliates.

Risk control is ensured by a function which is entirely independent of the risk management functions (supplemented by specific control functions concerning, in particular, financial and energy market risks – see § 2.3.1.1). This function notably ensures a consistent approach to the identification, evaluation and control of risk. According to these principles, each half year, consistent with the reporting schedule for the Group's half-year consolidated financial statements, EDF updates the consolidated risk mapping of its major risks within the EDF scope and that of its controlled and jointly-controlled subsidiaries and affiliates (with the exception of Dalkia International). This consolidated risk mapping is based on mapping exercises established by each operating or functional entity using a common methodology (typology, identification and evaluation principles, risk control measures, etc.). Each risk identified must be the subject of a clear action plan. Responsibility for the major risks falls to a project leader appointed by the corporate management. The principal risks to which the Group is exposed are outlined in the "risk factors" chapter of the *Document de Référence*.

The consolidated risk mapping is submitted, each half-year, for approval by the corporate management and presented to the audit Committee of the EDF Board of Directors. It is also regularly discussed by the executive managements of the main contributing branches and divisions and by those involved in the risk control function.

The overall risk mapping process form the basis of a number of other processes: notably the targeting of the internal control process, the establishment of the audit program, the insurance strategy and its implementation, the financial documentation (notably the "Risk Factors" chapter of the *Document de Référence*), the analysis of risks involved in projects reviewed by EDF's decision-making bodies (corporate management, Commitments and Shareholdings Committee, CEP-fuel Committee, Upstream-Downstream and Trading Committee, etc.). The risk control process contributes, in particular, to securing the investments and long-term commitments process by monitoring the respect of the methodology principles used for the risk analysis of projects submitted to the Commitments Committees.

In addition, EDF has a crisis management policy, the latest version of which was signed off by the Chairman and CEO in June 2005, which applies to the EDF scope and that of the controlled subsidiaries. It consists, notably, of:

- ensuring the existence of appropriate crisis management procedures, with regard to the risks incurred in each EDF branch, division and controlled subsidiary involved in managing the crisis;
- defining the procedures for cooperating with the regulated subsidiaries and – *via* the branches or divisions to which they report – with the jointly-controlled affiliates, during crisis periods;
- verifying the overall consistency.

A program of crisis exercises enables the effectiveness of these systems to be regularly stress-tested and to capitalize on the lessons learnt. Finally, the crisis management organization is regularly readjusted to reflect any significant change in internal organization or the external environment, as well as in the light of lessons learnt from any major crisis undergone.

# 2.3 Group control activities

## 2.3.1 Internal control procedures relating to the implementation and optimization of operations

### 2.3.1.1 SECTOR STRATEGIES ON RISK CONTROL

#### 2.3.1.1.1 CONTROL OF ENERGY MARKET RISKS

The Chairman and CEO's decision of December 9, 2005, formalizing the strategy on energy market risks, standardizes the management of these risks for the EDF scope and that of the controlled subsidiaries and stipulates all the necessary procedures for its implementation and the control of its application. For the regulated subsidiaries and jointly-controlled affiliates, the energy market risks strategy and the control procedure are reviewed within the framework of the governance bodies of these companies (Board of Directors, audit Committee). This strategy document specifically outlines:

- the governance and assessment procedures, clearly separating the risk management and risk control responsibilities and enabling the tracking of exposure within the scope defined above;
- the risk control procedures involving the EDF executive management whenever risk limits are exceeded. Note that particularly rigorous risk control procedures are in operation at EDF Trading, given the specificity of the business activities and the fast reaction time required;
- the independence of the function responsible for controlling energy market risks, which has a two-tier organizational structure, with the entities ensuring operating control and the Group Energy Market Risks department within Corporate Risk Management ensuring a second level of control.

EDF's audit Committee comments on the energy market risks strategy and its updating. The executive management approves the mandates for risk management in the entities annually when they are submitted to it along with the budget.

#### 2.3.1.1.2 FINANCIAL RISK CONTROL

EDF has established a Financial Risk Control department, responsible for controlling interest rate, currency, cash flow and counterparty risk for EDF and the controlled subsidiaries. This control is exercised through:

- the verification of the proper application of the financial risk management principles, notably through the regular calculation of risk indicators and the tracking of risk limits;
- the execution of control missions – methodology and organization – within the EDF entities and the controlled subsidiaries;
- the operating control of EDF's trading room which is responsible for treasury management. For these activities, a system of indicators and risk limits, verified daily, is in place to track and control financial risk exposure. The Head of Group Treasury, the Head of the Trading Room and the Head of Financial Risk Control are involved in this and are expected to respond the moment a limit is exceeded. An *ad hoc* Committee performs recurrent checks on limit compliance and decides on any potential changes to specific limits.

A report on the implementation of financial risk management strategies is made to the audit Committee once a year.

In order to guarantee the independence of the structure for controlling financial risks vis-à-vis the activities responsible for managing these risks, the Financial Risk Control department was transferred to the Corporate Risk Management Division. This department retains a functional link with the Corporate Finance, Finance and Treasury Division.

### 2.3.1.2 SPECIFIC CONTROLS

#### 2.3.1.2.1 PROCEDURE FOR APPROVING COMMITMENTS

The Commitments and Shareholdings Committee reviews all of the Group's commitments, excluding those of the regulated subsidiaries and jointly-controlled affiliates, and notably investment projects, disposal projects and long-term and "Fuel" contracts. It approves, except in exceptional cases, any investment involving sums in excess of € 20 million. Since late March 2003, Committee meetings have been systematically preceded by a meeting involving experts at corporate level (Corporate Risk Management, Legal Affairs, Finance, Corporate Audit, etc.) in order to verify the comprehensive scope and the depth of the risk analysis on the projects submitted. This work is based on a methodology referencing system for the analysis of the risks involved in development projects which takes into account the full impact of a project and, particularly, the evaluation of a number of stress scenarios.

#### 2.3.1.2.2 CONTROL OF INFORMATION SYSTEMS (IS)

**Organization of the internal control of the Information Systems**

The Information Systems internal control procedure is an integral part of the Group's internal control policy (proposed control objectives to be deployed by the operating entities) and covers the implementation of the function's strategies. These strategies address, in particular, the security of the information systems, the management of information systems projects, the management of information systems risks and respect of the IT and Data protection legislation.

The Group's Information Systems and Corporate Audit Divisions jointly launched an assessment to test the robustness of the internal control procedure for EDF's information systems in 2008 which was implemented during 2009:

- based on the information systems internal control objectives which can be found in the notes to the Group's internal control manual, the 2009 evaluation undertaken by the branches and divisions for the information systems area took into account the action plans resulting from the lessons learnt in 2008: as a reminder, EDF's information systems internal control referencing system is now based on the COBIT external referencing system;
- the coordination of internal control specific to information systems issues has been implemented by Information Systems since 2009 at two levels within the function's organization: a network of information systems internal control coordinators and the Committee of Heads of Information Systems representing the branches and divisions;
- the action plan for Information Systems internal control integrates the specialized second level of control.

**Measures with regard to information systems security**

The EDF group's Information Systems Security Strategy structures the orientations and organization of information system security. For EDF SA and ERDF, the adjustment of these strategies as well as the level of security are monitored monthly by a security Committee, chaired by the Group IS Division, and regrouping the Heads of Information Systems Security from all the entities within the EDF scope. This Committee reports to the Information Systems Security Committee, a strategic Committee created in 2009 comprising the members of the Committee of Heads of Information Systems for the branches and divisions and representatives of the Security Division and the Corporate Risk Management Division.

#### 2.3.1.2.3 ADMINISTRATION AND SUPERVISION OF SUBSIDIARIES/AFFILIATES

Each subsidiary, affiliate or shareholding (with the exception of the regulated subsidiaries) reports to a senior executive who is a member of the Executive Committee or to his or her delegated representative. This individual is responsible for proposing the Board directors who represent EDF within the governance bodies of these companies, to whom a letter of assignment is addressed outlining their remit and objectives. These assignments are updated each year by the Senior Executive Management Committee.

The Delegation of Board directors and Companies, in place since 2002, specifically monitors:

- the updating of the mapping of company reporting lines, in the light of decisions taken by the executive management;
- the tracking of "target composition profiles" which foresee the assembly of the necessary collective skills, as well as the profiles necessary to represent EDF effectively on the governance bodies of Subsidiary, Affiliate and Shareholding companies, in light of the strategy defined by the EDF senior executives to whom they report;
- compliance with the appointment process for Board directors, requiring prior management nomination (conformity with the target profile, control of the number of mandates, reporting line approval of the proposed Board director, etc.);
- the professional standards of new Board directors (induction training seminar for new Board directors with the support of the Corporate University, information *via* the internet site for the Board director community, on-going vocational training *via* the Board directors' workshops).

### 2.3.1.3 OTHER CONTROL POLICIES AND STRATEGIES

EDF has also defined:

- a health and safety policy, signed by the Chairman in October 2003;
- an insurance strategy initially submitted to the Board of Directors on July 1, 2004, at which time the Board took note of the report on EDF's situation and that of the controlled subsidiaries with regard to identified insurable risks and on the cover in place. It approved an action program aimed at raising awareness of the Group's insurable risks, developing the scope of insurance at Group level, improving and optimizing existing cover and taking out new cover. A progress report on the implementation of the action program of July 1, 2004, was presented to the audit Committee meetings of May 5, 2006, and April 2, 2007, which approved the future development lines. At the end of 2007, EDF commissioned an external consultant to undertake a comparison of the levels, scope and cost of covering EDF's risks with insurance or the transfer to the financial markets with those of other major comparable industrial groups. The conclusions of this study were presented to the audit Committee meeting of June 25, 2008, along with the updated picture of insurable risks. In 2009, the synergies achieved thanks to the inclusion of British Energy in the Group's controlled scope were presented during the annual status review in the audit Committee meeting of June 30.

## 2.3.2 Internal control procedures relating to the establishment and treatment of accounting and financial information

### 2.3.2.1 EDF GROUP CONSOLIDATED FINANCIAL STATEMENTS

#### 2.3.2.1.1 GROUP ACCOUNTING STANDARDS AND PRINCIPLES

The accounting standards used by the EDF group [1] are in line with international accounting standards (IFRS, IAS and interpretations) as approved by the European Union and applicable at December 31, 2009. The accounting rules and methods are described in the Group manual on accounting principles and summarized in the notes to the consolidated financial statements.

#### 2.3.2.1.2 PROCEDURE FOR ESTABLISHING AND CONTROLLING THE CONSOLIDATED FINANCIAL STATEMENTS

The internal control policy in the accounting area was defined in 2007 by the Accounting Consolidation Department. It reiterates the objectives in terms of the reliability and compliance of the reported accounting information and for the preservation of assets and the prevention and detection of fraud. It concerns the steering of the accounting organization, the upstream processes to populate the accounting databases and the production process for accounting information, account closings and financial communication.

The consolidated financial statements are drawn up by the Consolidation Department based on data input locally by each entity (entities of the parent company and subsidiaries and affiliates) and restated in line with Group standards based on a unique chart of accounts.

The annual consolidated financial statements are presented to the audit Committee then closed by the Board of Directors and approved by the Shareholders' Meeting. The half-year summary consolidated financial statements are presented to the audit Committee and the Board of Directors.

The closure of each half-year and annual accounting period gives rise to the establishment of a detailed plan of all the deliverables expected from each player involved in the publication of the financial statements and their analysis figuring in the financial statements, the establishment of the Management Report and, for annual account closings, the *Document de Référence*. Meetings between the branches and divisions within the parent company and the subsidiaries and affiliates prepare for each half-year or annual account closing by planning any changes in treatment and ensuring the reported financial and accounting information is reliable. Performance indicators are used to monitor respect of the deadlines and the quality of the information assembled. A retroactive analysis of the difficulties encountered during the production phase enables a steady improvement in the production process and the analysis of the consolidated financial statements.

The use of a financial language shared by Accounting and Financial Control contributes to the consistency of the Group's steering. This common language is one of the ways of ensuring continuity between:

- actual figures coming from accounting and the figures established in the forecasting phases;
- external financial communication and internal steering.

1. The scope of the Group's consolidated financial statements is detailed in the appendix to the financial statements..

This common language promotes dialogue and cooperation between these two functions at all levels of the organization and contributes to securing the exchange of information between the players and the quality of the information produced.

Performance steering and the management dialogue are based on data produced under Group accounting standards as used for the reporting of the consolidated financial statements.

#### 2.3.2.1.3 INTERNAL CONTROL OVER THE QUALITY OF ACCOUNTING WITHIN THE GROUP

The accounting internal control policies in the Group companies are the responsibility of each legal structure concerned.

### 2.3.2.2 EDF PARENT COMPANY FINANCIAL STATEMENTS

#### 2.3.2.2.1 PRINCIPLES AND ACCOUNTING STANDARDS

The EDF parent company financial statements are established in accordance with French law. Accounting options compatible with international standards are prioritized whenever possible.

Thanks to a network of coordinators within the branches, the accounting translation of the Group's new activities as well as the impact of the transposition of new accounting standards or regulations is ensured.

#### 2.3.2.2.2 PROCEDURE FOR ESTABLISHING AND CONTROLLING THE FINANCIAL STATEMENTS

Since January 1, 2009, EDF SA's transactional accounting (excluding Corporate Finance, Finance and Treasury, the Nuclear Fuel Division and Island Energy Systems) has been entrusted to an Accounting Shared Services Center within the Shared Services Division. The handling of transactional accounting is organized by process. Governance agreements establish the respective responsibilities of the branches, the operating accounting structures and the Accounting Consolidation Department.

The quality of accounting production involves, at each management level, annual certification at the close of a financial year, which provides a picture of the accounting quality for the year just past and highlights improvements to be made in the following financial year. In addition, a number of audit missions entering into the scope of the accounting function and management control are included in the Group's audit program. Thus, in 2009, audit missions were carried out on the "Investments and property, plant and equipment process", the "Payments received process", the "Control of inventories and work in progress – excluding nuclear fuel and metered energy" and the "Implementation of the AMF application guide".

In addition to the parent company financial statements, pursuant to French law [1], EDF produces unbundled accounts by activity: generation and distribution. These financial statements are established in line with the principles on unbundled accounting and the recommendations made by the French Energy Regulation Commission (CRE). Based on these financial statements, EDF establishes unbundled financial statements for the supply activity based on new criteria (supply to customers having exercised their eligibility – benefiting from new sales and marketing offers, supply to customers not having exercised their eligibility – maintained on the regulated tariff and gas supply). Following review by the statutory auditors, these financial statements were submitted to the French Energy Regulation Commission. The rules for establishing these financial statements must be commented on by the Competition Council prior to any announcement from the French Energy Regulation Commission as to their approval.

### 2.3.2.3 INTERNAL CONTROL ON THE QUALITY OF ACCOUNTING WITHIN THE EDF PARENT COMPANY

The accounting internal control procedure is an integral part of the Group's overall internal control framework. In effect, the Group's internal control reference guide has been enriched with control objectives requiring implementation by all the entities concerning the cross-functional processes which are upstream of accounting (sales, procurement, payroll, fixed assets, inventories, treasury, income tax and the production of accounts), as well as control objectives for implementation by the structures responsible for accounting production. This internal control reference guide is supported by a referencing system for the control of accounting quality used within EDF enabling, *via* broad-based cross-functional processes, the measurement, using performance indicators, of the quality of the accounting information produced. It specifies, in particular, the data to be tested, the recommended sampling methods and the reporting to be provided. These measurement methods help, within the accounting area, to justify the self-assessment implemented by the entities.

The control procedures for accounting production aim to check, in particular, the:
- precision and comprehensiveness of the accounting information;
- correct valuation of assets and liabilities, notably by the appropriate level of provisions for depreciation and for risks;
- regular justification of accounting;
- respect of the separation of financial years;
- respect of legal obligations;
- securing of the processes;
- execution of inventories ;
- comprehensive taking-into-account of centralization operations.

The recommendations of the Guide relating to the application of internal control of accounting and financial information reported by issuers, as defined by the French financial markets authority (*Autorité des Marchés Financiers* – AMF) at the beginning of 2007, have been taken into account in the internal control reference guide and in the internal control procedures of the central structures for establishing the parent company and consolidated financial statements and in the functional structures contributing to reported financial information.

#### 2.3.2.3.1 INTERNAL CONTROL OF 2009 ACCOUNTING

Given the increased industrial investment in the electricity generation fleet planned for the 2007 to 2012 period and the changes in standards and organization, the action to improve the reliability of the investment accounting process begun in 2007 was pursued during the 2009 financial year.

In 2009, the accounting quality indicator referencing system was reviewed and this work will continue in 2010.

1. French law 2000-108 of February 10, 2000, modified by law 2004-803 of August 9, 2004 and law 2006-1537 of December 7, 2006.

#### 2.3.2.3.2 2010 ACTION PLAN FOR INTERNAL CONTROL OF ACCOUNTING

Further work on the appropriateness of the internal control of accounting procedures will be pursued in 2010 within the framework of a joint approach involving accounting, management control and internal audit.

## 2.3.3 Internal control procedures relating to compliance with laws and regulations

The Legal Affairs Division is responsible for keeping track of legislative and regulatory changes and for raising the awareness of any changes likely to have an impact for the Group within the branches and divisions concerned.

Pursuant to a joint decision of June 1, 2007, the Legal Affairs and Corporate Audit Divisions adopted an action plan aimed at formalizing the role of Legal Affairs in defining the control objectives prescribed in the different EDF entities in order that their own internal control plans take these into account. These control objectives aim to ensure that these entities:

- indicate to Legal Affairs the areas of regulation which particularly concern them so that it can execute its monitoring mission in an optimum manner;
- systematically involve Legal Affairs as early as possible in their strategic plans and the management of major legal risks;
- ensure that their delegations of power effectively reflect their organization;
- identify their needs in terms of legal awareness within the fields that concern them, including the cross-functional needs and communicate them to Legal Affairs;
- ensure that individuals granted delegations of power are aware of their range and the consequences of their delegation.

#### 2.3.3.1 REGULATION RELATING TO THE INDUSTRIAL OPERATIONS

Numerous control procedures exist in the industrial, and especially nuclear, operations.

The regulation in force is specific to each country within which the facilities are located and external controls are organized by the relevant national authorities (the French Nuclear Safety Authority in France, the NEI in the United Kingdom, the Nuclear Regulatory Commission in the United States, etc.).

Certain players and departments are worthy of note, particularly for EDF SA:

- **the Senior Vice President, Nuclear Safety and Radioprotection** (*Inspecteur Général pour la Sûreté Nucléaire et la Radioprotection* – IGSNR) who, on behalf of the Chairman, ensures that all aspects of safety and radiation protection in the nuclear facilities for which EDF has operating responsibility are fully taken into account and whose annual report is published externally;
- **the Nuclear Inspection**, a department reporting directly to the Senior Vice President, Nuclear Operations, whose job is to regularly verify the level of safety in all the different Nuclear Operations entities.

The law of June 28, 2006 and its application decree dated February 23, 2007, relating to the securing of the financing of the nuclear charges requires the Company to specify in a report the procedures and systems enabling the identification, evaluation, management and control of risks associated with the evaluation of the nuclear charge and the management of the assets to cover this. The first version of the report was finalized in June 2007 and updated in June 2008 and 2009; this report includes a specific section on internal control.

In other areas (such as, for example, the monitoring of pressure vessels and of dams), each entity is responsible for defining and implementing the appropriate control procedures.

#### 2.3.3.2 OTHER REGULATIONS

Control procedures are also implemented for the application of regulations on working conditions, labor law and employee benefits.

The implementation of management systems, particularly with regard to environmental considerations and Health and Safety, has enabled tighter control of the application of regulations and compliance with any regulatory changes to be foreseen.

## 2.3.4 Internal control procedures relating to the implementation of instructions and orientations given by the Group's executive management

Within the framework of the deployment of the new internal audit and control policy, a diagnostic of internal control by the Group's executive management was conducted by the Corporate Audit Division as of 2006, focused specifically on the effective application of decisions taken by the Group's executive management. This was reflected in the implementation of a procedure for monitoring decisions taken by the Chairman.

Since 2007, a formalized decision has specified the procedure for establishing, circulating and controlling the decisions taken by the Chairman and CEO and the chief officers for the Committees they chair. The control of their implementation is, respectively, the responsibility of the Head of the Chairman and CEO's office and the secretaries of the corresponding Committees, and may be delegated to the Corporate Audit Division *via*, in particular, the audits in the annual program. The Corporate Audit Division includes a status report on the implementation of the Chairman's decision in its half-year report.

# 2.4 Communication and information dissemination

In addition to the communication and reporting initiatives outlined within this report, the following specific initiatives are worthy of note:

- **financial communication**:
  Since it was listed for trading in 2005, EDF has established procedures to prevent stock market transgressions. Hence a procedure has been defined to organize the respective roles within the Company with regard to the establishment, approval and dissemination of financial communication. A Disclosure Committee has been created, tasked principally with ensuring the validation and consistency of EDF's different financial communication sources as well as the review and validation of the contents of all financial communication channels. The Investor Relations Division provides secretarial services to this Committee, which comprises representatives from the Finance, Communication and Legal Affairs Divisions. Furthermore, a stock market compliance charter has been established, whose aim is to raise awareness of the obligations in terms of financial communication and particularly to reiterate the insider trading rules and to foresee periods during which senior executives and employees party to insider information may not trade in the Company's shares;
- **the code of conduct**:
  Respect of the codes of conduct for the regulated subsidiaries is verified annually by the French Energy Regulation Commission, which publishes the results in its annual report;
- **awareness of top executives**:
  An executive intranet, *EDF Demain*, available to EDF senior and top executives enables the information useful to these individuals to be shared, for example decisions taken by the Chairman and CEO, Group referencing systems, information on current projects and language pointers relating to these projects.
  Furthermore, an annual program of seminars is organized for top executives in order to familiarize them with important projects and major developments within the Group such as, for example, the functioning of the energy markets, price formation and the EDF group's business model;
- **a database of the major policies**:
  The Corporate Audit Division managed a project to harmonize the policies outlined in the internal control reference guide by defining a model policy. This project led to the creation of a "database of EDF SA's cross-functional policies", with a series of summary sheets outlining the main content of the model policy gradually being made available to all EDF executives on the "executive intranet".

# 2.5 Activities relating to the steering of Group internal control

There are three types of steering activities undertaken by the Corporate Audit Division:

- three-yearly audits of the control of control systems (mobilizing around 30% of Corporate Audit Division resources), and the other different categories of corporate audits (see § 2.1.3.3) which take into account the risks, potential significant malfunctions or external recommendations (see § 2.1.7);
- control of the implementation of recommendations arising from these audits through a formalized audit conclusion process (potentially consisting of a new audit if any significant shortfalls have been identified during the initial audit), involving the management reporting lines and internal control coordinators of each entity concerned (see § 2.1.3.3), the latter being responsible for ensuring the steering of control procedures inside each of the entities within their scope;
- sharing feedback on lessons learnt and acting as a driver of continuous progress *via*:
  - half-year summaries by the Corporate Audit Division that highlight the salient points but also, as need be, the categories of malfunction recurring in several audits conducted during the period,
  - half-year reviews between the Corporate Audit Division and each management executive during which an analysis of internal control systems is discussed, but which also involve status reports on action plans initiated following previous audits, as well as future audit programs, enabling the link between audits, risk and internal control measures to be reinforced,
  - qualitative analysis of annual self-assessment reports by the specialized Internal Control team within the Corporate Audit Division,
  - proactive measures overseen by the Corporate Audit Division in liaison with the operating and functional entities concerned, aimed at eliminating the weak points noted in the deployment of the internal control policy, and identified based on the management self-assessment process,
  - upgrading of tools and referencing systems such as, for example, the internal control manual, the model for the annual self-assessment reports and the specification of audits of internal control systems following audits conducted during the period,
  - regular bimonthly meetings of the Group's internal control coordinator network (around 45 individuals) facilitating, in particular, benchmarking and the sharing of best practices,

- regular meetings between the heads of audit teams within the branches (generation, customers, international operations and Group synergies, etc.) enabling, notably, the coordination of audit programs and practices, in line with the referencing system established by the Corporate Audit Division which defines the roles and responsibilities of the business line audit teams, together with the conditions for establishing their audit programs and for raising the professional standards of auditors,
- regular meetings between the Heads of Audit within the major jointly-controlled international affiliates (notably EDF Energy, EDF Trading, EnBW, Edison, Alpiq) in order to share best practices and benchmarks, as well as common work to help the executive managements of these companies strengthen their internal control systems,
- a three-yearly external audit of skills and processes implemented by the Corporate Audit Division within the framework of these different missions.

# 3 The dynamics of change

The numerous initiatives implemented over the past few years have enabled the clarification and strengthening of the internal control systems: the implementation of a risk management and control procedure, the ongoing development of our ethics policy, the standardization of the establishment of the consolidated financial statements, the implementation of a new internal control policy across the Group's entire scope which is continuously evolving to effectively fulfill the four key objectives recommended by the AMF (see introduction).

Ahead of the recommendations of the "working group" relating to the conditions enabling the «monitoring of the effectiveness of the internal control and risk management procedures", a number of specific projects have been launched in addition to the ongoing improvements outlined in this report, to help the audit Committee in its new mission of monitoring the effectiveness of the procedures in force.

Thus, in addition to the information coming from the self-assessments, which provides a picture of the current level of internal control deployment on one hand, and the results of the audits of these procedures which are a first indicator of the overall effectiveness and control of operating risks within the scope of the audited entity on the other, the following initiatives have been identified and launched:

- adaptation of the self-assessment methodology based on new performance criteria covering the level of deployment in addition to the existing criteria;
- extension of the internal control scope to the functional entities (implementation of a second level of control over subjects which are highly technical in nature, internal control of the coordination activities of the cross-functional processes, etc.);
- definition of traceability rules and archiving procedures for the control activities and results;
- organization of the inputs to performance indicators such as the inventory of incidents detected or those having been missed by the internal control procedures.

*This report was produced by a working group coordinated by the Corporate Audit Division, whose members were detailed in the introduction, and has been reviewed by, successively, the Corporate Secretary (January 13, 2010), the Disclosure Committee (January 29, 2010), the audit Committee (February 9, 2010) before being approved by the Board of Directors (February 10, 2010).*

Paris, February 10, 2010

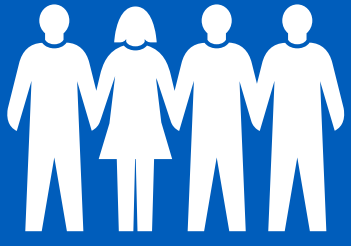
Chairman and CEO of EDF
Henri Proglio

# Appendix B
## EDF GROUP

## Statutory auditors' Report

prepared in accordance with Article L. 225-235 of the French Commercial Code ("*Code de commerce*"), on the Report prepared by the Chairman of the Board of Directors of Électricité de France SA

Year ended December 31, 2009



# Appendix B

*This is a free translation into English of a report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.*

Year ended December 31, 2009

To the shareholders,

In our capacity as statutory auditors of Électricité de France SA, and in accordance with Article L. 225-235 of the French Commercial Code ("*Code de commerce*"), we hereby report on the Report prepared by the Chairman of your Company in accordance with Article L. 225-37 of the French Commercial Code for the year ended December 31, 2009.

It is the Chairman's responsibility to prepare, and submit to the Board of Directors for approval, a report on the internal control and risk management procedures implemented by the Company and containing the other disclosures required by Article L. 225-37 particularly in terms of the corporate governance measures.

It is our responsibility:
- to report to you on the information contained in the Chairman's Report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information, and
- to attest that this Report contains the other disclosures required by Article L. 225-37 of the French Commercial Code ("*Code de commerce*"), it being specified that we are not responsible for verifying the fairness of these disclosures.

We conducted our work in accordance with professional standards applicable in France.

## Information on the internal control and risk management procedures relating to the preparation and processing of accounting and financial information

These standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's Report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information. These procedures consisted mainly in:

- obtaining an understanding of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information on which the information presented in the Chairman's Report is based and existing documentation;
- obtaining an understanding of the work involved in the preparation of this information and existing documentation;
- determining if any significant weaknesses in the internal control procedures relating to the preparation and processing of the accounting and financial information that we would have noted in the course of our engagement are properly disclosed in the Chairman's Report.

On the basis of our work, we have nothing to report on the information in respect of the Company's internal control and risk management procedures relating to the preparation and processing of accounting and financial information contained in the Report prepared by the Chairman of the Board in accordance with Article L. 225-37 of the French Commercial Code ("*Code de commerce*").

## OTHER DISCLOSURES

We hereby attest that the Chairman's Report includes the other disclosures required by Article L. 225-37 of the French Commercial Code ("*Code de commerce*").

Paris-La Défense and Neuilly-sur-Seine, February 10, 2010

The statutory auditors

| **KPMG Audit**<br>***Department of KPMG S.A.*** | | **Deloitte & Associés** | |
|---|---|---|---|
| Jean-Luc Decornoy | Michel Piette | Alain Pons | Tristan Guerlain |

# Appendix C
# EDF GROUP

## Information made available to the public by the EDF group during the last 12 months

(Annual document prepared pursuant to Article 222-7 of the AMF general regulations)

# ANNUAL DOCUMENT ESTABLISHED PURSUANT TO ARTICLE 222-7 OF THE AMF GENERAL REGULATIONS

Pursuant to Article 222-7 of the AMF General Regulations, the following table lists all the information which EDF made public since January 1, 2009, in order to satisfy the legal and regulatory obligations relating to financial instruments, financial instruments issuers and financial instruments markets.

**Information published by EDF and available on the website of the French financial markets authority (AMF) (www.amf-france.org) and/or on the website of EDF (www.edf.fr)**

| Information | Date |
|---|---|
| Drop in temperatures: EDF is mobilising all available generation resources | 01/06/2009 |
| Combined company will build "on unrivalled experience of EDF and British Energy" | 01/09/2009 |
| EDF Énergies Nouvelles is commissioning a new 100.5 MW wind farm in the United States | 01/15/2009 |
| Closing of agreement among Edison, Egyptian Government and EGPC for the hydrocarbons of Abu Qir in Egypt | 01/15/2009 |
| EDF is financing the majority of its investment in new Swiss energy company ALPIQ Holding SA through a contribution in kind | 01/16/2009 |
| EDF: successful launch of two bonds for a total amount of 4 billion Euros | 01/16/2009 |
| EDF issues USD 5 billion of bonds | 01/22/2009 |
| *Tempête dans le Sud-Ouest* | 01/24/2009 |
| New gas discover in Algeria | 01/26/2009 |
| EDF Energy welcomes Government announcement on nuclear sites | 01/27/2009 |
| Construction of a second EPR in France | 01/30/2009 |
| Preliminary business figures for 2008: EnBW operations continue to perform well | 02/10/2009 |
| EDF Énergies Nouvelles: Strong increase in 2008 full-year results, targets exceeded | 02/11/2009 |
| EDF group: Annual Results 2008 | 02/12/2009 |
| EDF Energy announces electricity price cut | 02/13/2009 |
| *Rejoindre EDF, leader européen des énergies de demain* | 02/18/2009 |
| EDF and ENEL seal an industrial partnership for the development of nuclear energy in Italy at the Franco-Italian summit | 02/24/2009 |
| EDF continues its commitment to working with disabled people | 02/25/2009 |
| EnBW and EWE apply for extension of the antitrust investigation period | 02/26/2009 |
| EnBW and Borusan plan strategic partnership in Turkey | 03/03/2009 |
| EDF and Toyota announce large-scale demonstration of Plug-in Hybrid Vehicles in Strasbourg, France | 03/18/2009 |
| *EDF met en place un CESU dédié à la petite enfance en présence de Laurent Wauquiez* | 03/24/2009 |
| Information about EDF Énergies Nouvelles interest in the Silicium de Provence project | 04/07/2009 |
| *Information relative au relèvement provisoire des fonctions de Pierre François et Pascal Durieux* | 04/10/2009 |
| EDF gets involved in supercritical coal-burning technology for generating electricity in China | 04/14/2009 |
| EDF Energy nominates sites for new nuclear build | 04/15/2009 |
| *EDF et la Fédération Envie s'engagent ensemble dans la maîtrise de l'énergie et la lutte contre la précarité* | 04/21/2009 |
| *EDF augmente sa dotation aux Fonds de Solidarité pour le Logement de 2 millions d'Euros pour favoriser les économies d'énergies* | 04/22/2009 |
| EDF Energy transition plan for Dr Andrew Spurr to succeed Bill Coley as Managing Director Existing Nuclear | 04/28/2009 |
| EDF has a new slogan : "*EDF, Changer l'énergie ensemble*" "EDF, Leading the energy change" | 04/30/2009 |
| *Intervention militaire à la centrale de Chinon : fausse alerte à la bombe* | 04/30/2009 |
| EDF Énergies Nouvelles: First-quarter 2009 revenues: up 66.4% to €231.8 million | 05/06/2009 |
| EDF Energy to hold UK nuclear suppliers forum on 30 June | 05/06/2009 |
| EDF Energy begins nuclear land sale process | 05/07/2009 |
| EnBW – First quarter shows stable development of business | 05/08/2009 |
| Centrica to invest in EDF nuclear business in the UK | 05/11/2009 |
| EDF Group Q1 2009 sales: 21.1 billion Euros, representing organic growth* of +12.5% | 05/12/2009 |
| A new worldwide agreement on Corporate Social Responsibility for the EDF Group | 05/14/2009 |
| EDF launches a bond issue to the general public | 05/28/2009 |

| Information | Date |
|---|---|
| EnBW acquires E.ON power station shares and strengthens its generating position | 05/29/2009 |
| EDF Énergies Nouvelles commissions the Sauveterre wind farm in France | 06/04/2009 |
| Renault and EDF strengthen collaboration on zero-emission electric vehicle | 06/22/2009 |
| EDF increases its shareholding in Austrian energy supplier ESTAG from 20% to 25% | 06/26/2009 |
| EDF Energy's new nuclear programme to generate billions of pounds of supply contracts and thousands of British jobs | 06/30/2009 |
| The Renault Nissan Alliance and EDF to test 100 electric vehicles in the Paris region in 2010 | 07/02/2009 |
| EDF Énergies Nouvelles: solar review at 30 June 2009 | 07/06/2009 |
| EWE and EnBW welcome decision by the German Federal Cartel Office: beginning of a new strategic partnership | 07/06/2009 |
| The Nam Theun 2 hydroelectric power station in Laos, built by EDF, produces its first kWh | 07/16/2009 |
| Successfull placement of a 700 Million Euros five-year bond issue | 07/16/2009 |
| EDF ENERGY to invest in UK Gas Storage Facility | 07/16/2009 |
| EDF and EnBW lay the first stone of extension work at the hydroelectric power station at Iffezheim, on the Rhine, in the presence of the Prime Minister of the State of Baden-Württemberg | 07/20/2009 |
| EWE and EnBW seal strategic partnership | 07/21/2009 |
| EDF Énergies Nouvelles signs a power purchase agreement for a 201 MW wind energy project in the United States | 07/21/2009 |
| EDF Énergies Nouvelles and First Solar Announce Venture to Build Largest Solar Manufacturing Plant in France | 07/23/2009 |
| Edison responds to the drop in demand for electric power and natural gas | 07/24/2009 |
| EDF Energy CEO Vincent de Rivaz confirms success in integration with British Energy | 07/28/2009 |
| EDF Énergies Nouvelles: Steep rise in interim results, objectives confirmed | 07/29/2009 |
| EDF's H1 2009 results: buoyant international business drives Group growth | 07/30/2009 |
| EnBW's business development remains stable | 07/30/2009 |
| ENEL and EDF announced the creation of an equal basis joint venture for the nuclear development in Italy | 08/03/2009 |
| New electricity tariff introduced from 15 August | 08/14/2009 |
| *Jocelyne Canetti nommée Médiateur d'EDF* | 09/03/2009 |
| EDF Énergies Nouvelles commissions two new wind farms in France | 09/07/2009 |
| *Première édition du prix Fem'Energia, initié par EDF et WiN France, pour promouvoir la place des femmes dans le nucléaire* | 09/09/2009 |
| Board of Directors decides to convene a General Meeting of EDF shareholders | 09/27/2009 |
| EDF Énergies Nouvelles is commissioning the Castanet wind farm in France | 09/29/2009 |
| EDF, EnBW and E.ON sign agreements on a swap of electric drawing rights and generation assets for more than 1,200 MW | 10/01/2009 |
| The EDF Group initiates a process to evaluate ownership options for its UK electricity distribution networks | 10/02/2009 |
| Constellation Energy-EDF Nuclear Joint Venture Receives U.S. Nuclear Regulatory Commission Approval | 10/09/2009 |
| Meeting in Paris between Pierre Gadonneix, EDF's Chairman and CEO, and Alexey Miller, CEO of Gazprom | 10/16/2009 |
| Edison: Italian-Turkish joint declaration gives ITGI gas pipeline strong impetus | 10/19/2009 |
| EDF Énergies Nouvelles commissions a 38 MW wind farm in Greece | 10/21/2009 |
| *3ème Energy Day du groupe EDF : plus de 2 000 ingénieurs et techniciens à la découverte des métiers d'un leader européen de l'énergie* | 10/22/2009 |
| Edison: Interim report on Operations (3rd Quarter 2009) | 10/30/2009 |
| Maryland Public Service Commission's Ruling Related to the Proposed Nuclear Joint Venture Between Constellation Energy and EDF Group | 10/30/2009 |
| EDF authorized to invest in nuclear in the U.S. | 11/02/2009 |
| Long-term contracts proceedings: EDF offers commitments to the European Commission | 11/04/2009 |
| Combined General Meeting of EDF Shareholders: nominations of board members and distribution of an interim dividend of €0.55 per share, payable in cash or shares | 11/05/2009 |
| EDF : distribution of an interim dividend of €0.55 per share | 11/05/2009 |
| Constellation Energy and EDF Group Complete Nuclear Joint Venture | 11/06/2009 |
| Acquisition of a majority interest in SPE: the European Commission approves the transaction in return for commitments from EDF | 11/12/2009 |
| EDF Group's sales at 30 September 2009: €48.3 billion, +6.7% | 11/12/2009 |
| EnBW publishes its Results for the 3rd Quarter 2009 | 11/13/2009 |
| EDF inaugurates the new Materials Ageing Institute | 11/17/2009 |

# Appendix C

| Information | Date |
|---|---|
| *La Fondation Abbé Pierre et EDF s'engagent pour créer des logements sociaux économes en énergie* | 11/18/2009 |
| Auctions: 500 MW of electricity sold to alternative suppliers | 11/19/2009 |
| Henri Proglio appointed EDF Chairman and CEO | 11/25/2009 |
| EDF and Centrica finalise their agreement allowing EDF to acquire a majority shareholding in SPE and for Centrica to invest in Nuclear energy in the UK | 11/26/2009 |
| Gazprom and EDF sign memorandum detailing joint participation in South Stream Project | 11/27/2009 |
| EDF and the Russian energy company Inter Rao sign a framework agreement on energy efficiency | 11/27/2009 |
| EDF Énergies Nouvelles signs a turbine agreement with Repower in the United States | 12/07/2009 |
| *EDF, via sa filiale Edelia, expérimente en Bretagne de nouvelles solutions de maîtrise des consommations d'énergie* | 12/07/2009 |
| Pan-European Plug-in Hybrid Lease Programme officially started – Handover of first new Prius Plug-in Hybrid to Mayor of Strasbourg | 12/14/2009 |
| Successful 2009 interim dividend shares payment option | 12/15/2009 |
| EDF confirms its role as an investor and operator in China, developing nuclear power plants in partnership with CGNPC | 12/21/2009 |
| EDF Energy Accepts Ofgem Price Control Review Proposals | 12/23/2009 |
| EDF, EnBW and E.ON concluded final agreements on a swap of electric drawing rights and generation assets<br>EDF and Charbonnages de France completed the sell to E.ON of their stake in SNET | 01/05/2010 |
| Haiti earthquake: EDF Group mobilises to bring aid to disaster victims | 01/15/2010 |
| The EDF Group has set up a new Senior Management team focused around Henri Proglio | 02/04/2010 |
| EDF and Total sign an agreement in the planned Dunkirk LNG terminal | 03/08/2010 |
| *Corse (situation à 18h30) : La totalité des clients rétablis en Corse 48 heures après le début des intempéries* | 03/11/2010 |
| Renault Trucks and EDF sign a partnership agreement to develop the use of electric lorries and commercial vehicles for the transportation of goods in urban areas | 03/22/2010 |
| Partnership agreement between EDF and EXELTIUM scheduled to start on 1 May 2010 | 03/25/2010 |
| *Dans le cadre de la semaine du Développement Durable, EDF et le réseau Envie poursuivent leur partenariat autour de la sensibilisation du grand public aux économies d'énergie* | 03/30/2010 |

### Information registered by EDF with the *Greffe* of the Paris Commercial Court (date of registration)

| Information | Date |
|---|---|
| Extract – Minutes of the Board of Directors (May 10, 2009) | 09/30/2009 |
| Extract – Minutes of the Shareholders' meeting (November 5, 2009) | 02/26/2010 |
| By-laws updated | 02/26/2010 |
| Extract – Minutes of the Board of Directors (January 21, 2010) | 02/26/2010 |
| Extract – Minutes of the Board of Directors (November 23, 2009) | 02/26/2010 |
| Extract – Minutes of the Board of Directors (December 8, 2009) | 02/26/2010 |
| By-laws updated | 02/26/2010 |

### Information published by EDF in the *Bulletin des Annonces Légales Obligatoires* ("BALO") and available on the BALO website (www.balo.journal-officiel.gouv.fr)

| Information | Date |
|---|---|
| Notice of meeting to the May 20, 2009 Shareholders' Meeting | 03/06/2009 |
| Convocation to the May 20, 2009 Shareholders' Meeting | 04/27/2009 |
| 2008 consolidated annual financial statements of the Group | 08/05/2009 |
| Notice of meeting to the November 25, 2009 Shareholders' Meeting | 09/30/2009 |
| Amendment to the notice of meeting to the May 20, 2009 Shareholders' Meeting | 10/16/2009 |
| Notice of meeting to the May 18, 2010 Shareholders' Meeting | 03/08/2010 |

## Information published by EDF abroad

| Information | Support | Date |
|---|---|---|
| Consolidated annual results 2008 | International daily press | 02/17/2009 |
| Consolidated annual results 2009 | International daily press | 02/16-18/2010 |

## Financial publications

| Information | Support | Date |
|---|---|---|
| Consolidated annual results 2008 | EDF group website (www.edf.fr) | 02/12/2009 |
| | Press release on the EDF website | 02/12/2009 |
| | Press release on the AMF website (www.amf-france.org) | 02/12/2009 |
| | Press conference | 02/12/2009 |
| | Presentation to analysts | 02/12/2009 |
| | National daily press | 02/12/2009 |
| | Financial websites | 02/12/2009 |
| Consolidated financial statements as of December 31, 2008 | EDF group website (www.edf.fr) | 02/12/2009 |
| Consolidated half-year results 2009 | EDF group website (www.edf.fr) ` | 07/30/2009 |
| | Press conference | 07/30/2009 |
| | Presentation to analysts | 07/30/2009 |
| | National daily press | 07/30/2009 |
| | Financial websites | 07/30/2009 |
| Consolidated annual results 2009 | EDF group website (www.edf.fr) ` | 02/11/2010 |
| | Press conference | 02/11/2010 |
| | Presentation to analysts | 02/11/2010 |
| | National daily press | 02/11/2010 |
| | Financial websites | 02/11/2010 |
| Consolidated financial statements as of December 31, 2009 | EDF group website (www.edf.fr) | 02/12/2010 |

## Information available to EDF shareholders as part of the Shareholders' Meetings

| Information | Date |
|---|---|
| Invitation to the Shareholders' meeting | Shareholders' meeting on May 20, 2009 |
| The text of the resolutions and summary of the Group's activity | Shareholders' meeting on May 20, 2009 |
| The guide to the General meeting | Shareholders' meeting on May 20, 2009 |
| Annual Report | Shareholders' meeting on May 20, 2009 |

## Documents published as part of the initial public offering and available on the website of the French financial markets authority (AMF) (www.amf-france.org)

| Information | Date |
|---|---|
| *Document de Référence* 2008 | 04/14/2009 |
| *Document de Référence* update | 05/15/2009 |
| *Prospectus de base* | 05/18/2009 |
| Prospectus supplement | 09/02/2009 |

# Appendix D
# EDF GROUP

## EDF SA's financial statements and Statutory auditors' Report on the financial statements

# Contents

NB: Most figures in the tables are reported in millions of Euros.

# Income statements

| *(in millions of Euros)* | Notes | 2009 | 2008 |
|---|---|---|---|
| Sales [1] | 4 | 38,895 | 39,003 |
| Change in inventories and work-in-progress | | 193 | 48 |
| Capitalized production | | 399 | 315 |
| Operating subsidies | 5 | 2,672 | 1,874 |
| Reversals of provisions, amortization and depreciation | 6 | 3,711 | 5,592 |
| Transfers of charges | | 185 | 101 |
| Other operating income | 7 | 897 | 1,034 |
| **I - TOTAL OPERATING INCOME** | | **46,952** | **47,967** |
| **Purchases and other external expenses** | 8 | **30,156** | **31,060** |
| Fuel purchases used - power generation | | 2,820 | 2,457 |
| Energy purchases | | 9,821 | 9,495 |
| Other purchases used | | 1,107 | 3,227 |
| Services | | 16,408 | 15,881 |
| **Taxes other than income taxes** | 9 | **2,899** | **2,360** |
| Based on salaries and wages | | 116 | 110 |
| Energy-related | | 1,301 | 882 |
| Other | | 1,482 | 1,368 |
| **Personnel expenses** | 10 | **5,290** | **5,095** |
| Salaries and wages | | 3,265 | 3,178 |
| Social contributions | | 2,025 | 1,917 |
| **Depreciation, amortization and provisions** | | **3,673** | **4,576** |
| Depreciation and amortization on fixed assets | 11 | 1,861 | 1,742 |
| Provisions for depreciation on fixed assets | 12 | 47 | 136 |
| Provisions for depreciation on current assets | 12 | 159 | 122 |
| Provisions for risks and expenses | 12 | 1,606 | 2,576 |
| **Other operating expenses** | 13 | **1,008** | **1,444** |
| **II - TOTAL OPERATING EXPENSES** | | **43,026** | **44,535** |
| **OPERATING PROFIT (I - II)** | | **3,926** | **3,432** |
| **Joint operations** | | | |
| III - Profit assigned or loss transferred | | 1 | 11 |
| IV - Loss charged or profit transferred | | 6 | 2 |
| **Financial income** | | | |
| Income from investments | | 715 | 1,572 |
| Income from other securities and receivables related to fixed assets | | 814 | 644 |
| Interest and similar income | | 1,992 | 556 |
| Reversals of provisions and transfers of charges | | 2,484 | 373 |
| Foreign exchange gains | | 4,223 | 1,751 |
| Net income on sales of marketable securities | | 113 | 75 |
| **V - TOTAL FINANCIAL INCOME** | | **10,341** | **4,971** |
| Financial amortization and provisions | | 2,371 | 4,781 |
| Interest and similar expenses | | 3,769 | 1,520 |
| Foreign exchange losses | | 4,058 | 1,797 |
| Net charges on sales of marketable securities | | 70 | 30 |
| **VI - TOTAL FINANCIAL EXPENSES** | | **10,268** | **8,128** |
| **FINANCIAL RESULT (V - VI)** | **14** | **73** | **(3,157)** |
| **PROFIT OR LOSS BEFORE INCOME TAXES AND EXCEPTIONAL ITEMS (I - II + III - IV + V - VI)** | | **3,994** | **284** |
| Exceptional income on capital transactions | | 1,668 | 365 |
| Reversals of depreciation, amortization and provisions and transfers of charges | | 641 | 536 |
| **VII - TOTAL EXCEPTIONAL INCOME** | | **2,309** | **901** |
| Exceptional charges on capital transactions | | 979 | 199 |
| Book values of real estate and financial assets sold | | 808 | 186 |
| Other | | 171 | 13 |
| Exceptional depreciation, amortization and provisions | | 343 | 465 |
| Allocation to tax regulated reserves | | 186 | 264 |
| Depreciation, amortization and provisions | | 157 | 201 |
| **VIII - TOTAL EXCEPTIONAL EXPENSES** | | **1,322** | **664** |
| **EXCEPTIONAL RESULT (VII-VIII)** | **15** | **987** | **237** |
| **IX - Income taxes** | 16 | **401** | **(346)** |
| **Total income (I + III + V + VII )** | | **59,603** | **53,850** |
| **Total expenses (II + IV + VI + VIII + IX)** | | **55,023** | **52,983** |
| **NET INCOME** | | **4,580** | **867** |

*(1) Production of goods for export in 2009: € 5,364 million; production of services for export in 2009: € 257 million.*

# Balance sheets

| ASSETS *(in millions of Euros)* | Notes | 12.31.2009 Gross values | Depreciation or provisions | Net values | 12.31.2008 Net values |
|---|---|---|---|---|---|
| **Intangible assets** | 17, 18 | **938** | **230** | **708** | **790** |
| Land | | 124 | 5 | 119 | 120 |
| Buildings | | 9,025 | 5,888 | 3,137 | 3,191 |
| Technical installations, plant and machinery, equipment and fixtures | | 55,564 | 37,562 | 18,002 | 18,222 |
| Other tangible assets | | 993 | 688 | 305 | 299 |
| **Property, plant and equipment owned by EDF** | 17, 18 | **65,706** | **44,143** | **21,563** | **21,832** |
| Land | | 36 | - | 36 | 37 |
| Buildings | | 8,410 | 5,184 | 3,226 | 3,299 |
| Technical installations, plant and machinery, equipment and fixtures | | 2,849 | 1,451 | 1,398 | 1,344 |
| Other tangible assets | | 11 | 10 | 1 | 2 |
| **Property, plant and equipment** | 17 | **11,306** | **6,645** | **4,661** | **4,682** |
| Work-in-progress | | 4,567 | - | 4,567 | 3,078 |
| Advances | | 1,066 | - | 1,066 | 739 |
| **Tangible assets in progress** | 17 | **5,633** | **-** | **5,633** | **3,817** |
| **Intangible assets in progress** | 17 | **739** | **-** | **739** | **500** |
| Investments and related receivables | | 45,801 | 220 | 45,581 | 34,737 |
| Investment securities | | 12,059 | 835 | 11,224 | 8,252 |
| Loans and other financial assets | | 9,213 | 6 | 9,207 | 7,428 |
| **Investments** | 19, 22 | **67,073** | **1,061** | **66,012** | **50,417** |
| **TOTAL I - FIXED ASSETS** | | **151,395** | **52,079** | **99,316** | **82,038** |
| Raw materials | | 7,158 | 12 | 7,146 | 6,804 |
| Other supplies | | 737 | 160 | 577 | 468 |
| Work-in-progress and other | | 16 | - | 16 | 25 |
| **Inventories and work-in-progress** | 21 | **7,911** | **172** | **7,739** | **7,297** |
| **Advances on orders** | 22 | **473** | **-** | **473** | **629** |
| Trade receivables and related accounts | | 11,266 | 228 | 11,038 | 11,248 |
| Other receivables | | 6,093 | 5 | 6,088 | 5,925 |
| **Trade and other receivables** | | **17,359** | **233** | **17,126** | **17,173** |
| Marketable securities | 23, 24 | 5,271 | 10 | 5,261 | 7,667 |
| Cash instruments | 22 | 1,185 | - | 1,185 | 399 |
| Cash and cash equivalents | 24 | 2,206 | - | 2,206 | 586 |
| Prepaid expenses | 22 | 565 | - | 565 | 812 |
| **Other current assets** | | **9,227** | **10** | **9,217** | **9,464** |
| **TOTAL II - CURRENT ASSETS** | | **34,970** | **415** | **34,555** | **34,563** |
| **Deferred charges (III)** | | **129** | **-** | **129** | **28** |
| **Bond redemption premiums (IV)** | | **204** | **39** | **165** | **55** |
| **Unrealized foreign exchange losses (V)** | 25 | **66** | **-** | **66** | **513** |
| **TOTAL ASSETS (I + II + III + IV + V)** | | **186,764** | **52,533** | **134,231** | **117,197** |

| EQUITY AND LIABILITIES *(in millions of Euros)* | Notes | 12.31.2009 | 12.31.2008 |
|---|---|---|---|
| Capital | | 924 | 911 |
| Capital-related premiums | | | |
| Share issue premium | | 7,033 | 6,110 |
| Merger premium | | 25 | 25 |
| Revaluation surplus | | | |
| Special reserves - law of December 28, 1959 | | 631 | 631 |
| Tax-regulated reserves - law of December 29, 1976 | | 16 | 16 |
| Tax-regulated reserves | | | |
| Legal reserves | | 91 | 91 |
| Retained earnings | | 5,450 | 6,913 |
| Profit or loss for the financial year | | 4,580 | 867 |
| Interim dividend | | (1,002) | (1,166) |
| Investment subsidies | | 86 | 55 |
| Tax-regulated provisions | | | |
| Provisions related to depreciable fixed assets (law of December 30, 1977) | | 17 | 18 |
| Excess depreciation | | 6,910 | 7,089 |
| **Equity** | 26 | **24,761** | **21,560** |
| **Special concession accounts** | 27 | **1,967** | **2,038** |
| **TOTAL I - EQUITY AND CONCESSION ACCOUNTS** | | **26,728** | **23,598** |
| **Provisions for risks** | 28 | **294** | **778** |
| Renewal of facilities operated under concession | 31 | 219 | 202 |
| Back-end nuclear cycle | 29 | 15,030 | 14,711 |
| Decommissioning and last cores | 29 | 12,958 | 12,469 |
| Employee benefits | 30 | 9,695 | 9,518 |
| Other expenses | 32 | 1,347 | 2,352 |
| **Provisions for expenses** | | **39,249** | **39,252** |
| **TOTAL II - PROVISIONS FOR RISKS AND EXPENSES** | | **39,543** | **40,030** |
| Bonds and borrowings (1) | | 32,902 | 20,552 |
| Advances received on consumption | | 149 | 158 |
| Other debts | | 1,324 | 914 |
| **Financial liabilities (2)** | 33, 34 | **34,375** | **21,624** |
| **Advances and payments on account received** | 33 | **4,281** | **3,765** |
| Trade payables and related accounts | | 9,645 | 10,226 |
| Tax and social security debts payable | | 5,041 | 4,999 |
| Debts related to fixed assets and related accounts | | 1,498 | 1,448 |
| Other liabilities | | 8,221 | 7,056 |
| **Operating, investment and other liabilities** | 33 | **24,405** | **23,729** |
| **Cash instruments** | 33 | **1,314** | **438** |
| **Deferred income** | 33 | **3,400** | **3,796** |
| **TOTAL III - LIABILITIES (3)** | | **67,775** | **53,352** |
| **Unrealized foreign exchange gains (IV)** | 25 | **185** | **217** |
| **TOTAL EQUITY AND LIABILITIES (I + II + III + IV)** | | **134,231** | **117,197** |

*(1) €22,305 million in Euros and €10,597 million in other currencies.*

*(2) Including €16 million of bank overdrafts.*

*(3) Including €34,145 million of debts due in more than one year.*

# Cash flow statements

| *(in millions of Euros)* | | 2009 | 2008 |
|---|---|---|---|
| **Operating activities** | | | |
| Profit / (loss) before income tax | | 4,981 | 521 |
| Amortization, depreciation and provisions | | (522) | 3,294 |
| Capital (gains) / losses | | (649) | (139) |
| Financial (income) and expenses | | 83 | (1,206) |
| Changes in working capital | | (726) | 664 |
| **Cash flows from operations** | | **3,167** | **3,134** |
| Net financial expenses, including dividends received | | 196 | 2,142 |
| Income taxes paid | | 573 | (952) |
| **Net cash flow from operating activities** | **(A)** | **3,936** | **4,324** |
| **Investing activities** | | | |
| Purchases of property, plant and equipment and intangible assets | | (3,529) | (2,492) |
| Sales of property, plant and equipment and intangible assets | | 55 | 76 |
| Changes in financial assets | | (10,994) | (6,307) |
| **Net cash flows used in investing activities** | **(B)** | **(14,468)** | **(8,723)** |
| **Financing activities** | | | |
| Issuance of borrowings and underwriting agreements | | 25,570 | 10,324 |
| Repayment of borrowings and underwriting agreements | | (13,369) | (2,264) |
| Dividends paid | | (1,228) | (2,437) |
| Increase in special concession accounts | | 13 | 15 |
| Investment subsidies | | 41 | 16 |
| **Net cash flows from financing activities** | **(C)** | **11,027** | **5,654** |
| **Net increase / (decrease) in cash and cash equivalents** | **(A)+(B)+(C)** | **495** | **1,255** |
| **Cash and cash equivalents - opening balance*** | | **360** | **(807)** |
| Effect of currency fluctuations | | 7 | (98) |
| Financial income on cash and cash equivalents | | 33 | 10 |
| **CASH AND CASH EQUIVALENTS - CLOSING BALANCE*** | | **895** | **360** |

** "Cash and cash equivalents – opening balance" and "Cash and cash equivalents – closing balance" do not include investment funds nor negotiable debt instruments maturing in more than three months. Details of the variation in cash and cash equivalents are presented in Note 24.*

## Notes to the financial statements

ÉLECTRICITÉ DE FRANCE SA (EDF), the parent company of the EDF group, is an electricity and gas generation and supply operator. EDF also covers all the business activities of Island Energy Systems, IES (located in Corsica and France's overseas departments).

## Note 1 Accounting principles and methods



## 1.1 Accounting policies

EDF's annual financial statements are prepared in accordance with the accounting principles and methods defined by the French national chart of accounts, as presented by CRC (French accounting Committee) regulation 99-03 of April 29, 1999 with additions in subsequent regulations.

## 1.2 Management estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, and positive and negative contingencies at year-end. The figures in future financial statements may differ from current estimates due to changes in these assumptions or economic conditions.

The principal accounting methods involving use of estimates and judgments concern measurement of nuclear provisions, pensions, other long-term and post-employment benefit obligations, and estimation of the quantities of energy delivered but not yet measured or billed.

## 1.3 Sales

Sales essentially comprise of income from the sale of energy and services, which mainly include services for delivery through the energy distribution network purchased from the subsidiary ERDF and reinvoiced to end-customers.

EDF accounts for sales when:
- a contract exists;
- delivery has taken place (or the service provided);
- a quantifiable price has been established or can be determined;
- and the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

The quantities of energy delivered but not yet measured or billed at the end of the period are calculated based on the quantities used by the sites of the EDF balance responsible entities less the quantities billed, after losses measured by a statistical method presented to the *Commission de Régulation de l'Énergie* (CRE), the French Energy Regulator. These quantities are valued using an average price determined in reference to energy invoiced in the previous month.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at the balance sheet date.

Sales of energy to EDF Trading, the Group's trading company, are recorded at their contractually stipulated amount.

## 1.4 Intangible assets

Intangible assets mainly consist of software, concession rights, licenses, trademarks and similar rights, operating rights, development costs, storage capacity reservation costs, and greenhouse gas emission quotas.

Development costs are recognized as an intangible asset if EDF can demonstrate:
- the technical feasibility of making the intangible asset ready for commissioning or sale;
- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset;
- its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

Research expenses are recognized as expenses in the financial period incurred.

In application of ruling 2004-330 of April 14, 2004, since January 1, 2005 the French State has attributed energy operators a fixed quantity of quotas representing one tonne of carbon dioxide equivalent each for a specified period.

In compliance with the CNC (French National Accounting Council) opinion 2004-C issued on March 23, 2004, greenhouse gas emission quotas are recorded as intangible assets at their market value at the date of registration in the SERINGAS register managed by the *Caisse des Dépôts et Consignations*, with an offsetting entry under "Other liabilities".

Intangible assets other than greenhouse gas emission quotas are amortized on a straight-line basis over their useful lives regardless of whether they are generated in-house or purchased.

# 1.5 Property, plant and equipment

Property, plant and equipment are recorded at acquisition or production cost or at their revalued amount where applicable, less accumulated depreciation and provisions:

- cost corresponds to acquisition or production cost (including external costs as well as costs incurred directly by EDF);
- the revaluations were performed in accordance with French legislation (law of December 28, 1959 for fixed assets put into service before January 1, 1960 and specific legislation issued for those put into service before January 1, 1977).

The cost of facilities developed in-house includes all labor and materials costs, and all other production costs attributable to the construction cost of the asset.

In application of CRC regulation 2000-06 on liabilities, confirmed by Emergency Committee regulation 2005-H, certain assets have been recognized in connection with provisions for liabilities related to decommissioning of nuclear and fossil-fired power plants and the provision for last cores.
At the date of commissioning, these assets are carried in property, plant and equipment, and are measured and recorded in the same way as the corresponding provision.
They are depreciated in the same way and over the same useful life as the relevant facility.
The asset ceases to be recognized when the associated facility has been totally depreciated.

Pre-operating expenses and borrowing costs incurred to finance installations are recognized as expenses.

EDF's property, plant and equipment comprise both assets owned by EDF and assets operated under concession.

## 1.5.1 Property, plant and equipment owned by EDF

Most of the property, plant and equipment owned by EDF concern nuclear facilities.
The following components are included in the balance sheet value of nuclear power plants currently in service:

- the discounted cost of decommissioning the facilities;
- the discounted cost of last core nuclear fuel, including depreciation of residual reactor fuel that will not be fully irradiated when production shuts down, the cost of nuclear fuel reprocessing and the cost of removing and storing waste from these operations.

Strategic safety spare parts for nuclear facilities are treated as property, plant and equipment, and depreciated over the residual useful life of the last unit of the series to which they are assigned.

Impairment is booked in respect of certain temporarily closed down non-nuclear plants, when it is unlikely that they will ever be brought back into service.

## 1.5.2 Property, plant and equipment operated under concession

In France, EDF is the operator for two types of public service concessions:

- public distribution facilities operated under concession rights licensed by local authorities (municipalities or syndicated municipalities);
- hydropower concessions with the French State as grantor.

### 1.5.2.1 PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS

EDF is the concession operator for the island networks located in Corsica and France's overseas departments.

The accounting treatment of concessions is based on the concession agreements, with particular reference to their special clauses. These contracts generally use standard concession rules deriving from the 1992 Framework Contract negotiated with the National Federation of Licensing Authorities (*Fédération Nationale des Collectivités Concédantes et Régies* – FNCCR) and approved by the public authorities.

All assets used under concessions are reported in the balance sheet assets as property, plant and equipment operated under concession, regardless of their initial financing, with recognition of a liability corresponding to any assets supplied for nil consideration by concession grantors.

These items of property, plant and equipment are stated at cost less accumulated depreciation, and amortized on a straight-line basis over the estimated useful life.

#### 1.5.2.2 HYDROPOWER CONCESSIONS

Hydropower concessions follow standard rules approved by decree.

Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc.) and, in the case of recently-renewed concessions, also include electricity generation and switching facilities (alternators, etc.).
The concession assets are recorded under property, plant and equipment operated under concession. These items of property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is calculated over their useful life, which is generally identical to the term of the concession.

Additional depreciation is booked in complement to industrial depreciation for assets operated under concession that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term.

### 1.5.3 Depreciation

Property, plant and equipment are depreciated on a straight-line basis.

The estimated useful lives used to determine industrial depreciation for the principal facilities are the following:

- Hydroelectric dams: 75 years
- Electromechanical equipment used in hydropower plants: 50 years
- Fossil-fired power plants: 30 to 45 years
- Nuclear power plants: 40 years
- Distribution installations (lines, substations): 20 to 45 years

## 1.6 Long-term asset impairment

At the year-end and at each interim reporting date, EDF assesses whether there is any indication that an asset could have been significantly impaired. If so, an impairment test is carried out as follows:

- EDF measures any long-term asset impairment by comparing the carrying value of these assets, classified into cash-generating units where necessary, and their recoverable amount, usually determined using the discounted future cash flow method;
- the discount rates used for these purposes are based on the weighted average cost of capital for each asset or group of assets concerned;
- future cash flows are based on medium-term plan projections.

This impairment test is based on business plans and assumptions approved by the management.

## 1.7 Financial assets

### 1.7.1 Investments

Investments are carried at cost, except for certain investments acquired before January 1, 1977 which were revalued, replacing the original cost by the fair value at the end of 1976 if the fair value was higher.
Gains and losses on sales of investments are valued using the FIFO (first in first out) method.
In accordance with the Emergency Committee opinion 2007C of June 15, 2007, transfer duties, fees and commissions and legal fees related to acquisitions of investments are included in the cost of acquisition of the asset. This concerns shares governed by article 39.1.5 of the French Tax Code. Expenses of this type relating to other shares are included in expenses. Tax-regulated amortization of acquisition costs is recorded in an excess depreciation account.

When the book value of investments is higher than their value in use, a provision is recorded to cover the difference.

The value in use of listed securities in non-consolidated entities is based on stock market price.
For unlisted and listed securities in companies included in the EDF group consolidation, the value in use is determined by reference to equity or net adjusted consolidated assets, taking into account expert valuation information and information that has become known since the previous year-end when necessary.

### 1.7.2 Investment securities

EDF has set up two investment portfolios:

- the first comprises dedicated financial assets intended to finance the end of nuclear fuel cycle operations, for which provisions have been accrued. These assets are managed separately from other financial assets and investments in view of their specific objective, and comprise bonds, equities, collective investment funds and "reserved" funds built up by EDF solely for its own use;
- the second comprises securities acquired to generate a satisfactory return on investment in the medium to long term, without participating in the management of the companies concerned.

Investment securities also include treasury shares that cover obligations relating to debt instruments providing access to the company's capital, acquired under a liquidity contract with an investment services company or through an external operation or capital reduction, in application of CNC avis 98-D of December 17, 1988.

Shares are recorded at acquisition cost. In compliance with CRC regulation 99-03 and CNC Emergency Committee opinion 2005-J of December 6, 2005, transfer duties, professional fees, commissions, legal expenses and purchasing costs are all charged to expenses, under the option used for other investments and non-consolidated investments.

The investment portfolios (shares and bonds) are recorded at acquisition cost. If the carrying amount of a security is lower than the book value, the unrealized capital loss is fully provisioned without being netted against potential gains on other securities. The carrying amount of listed securities is assessed individually, taking the stock market price into account. For unlisted securities, the carrying amount is also assessed individually, mainly in consideration of the growth prospects of the companies concerned and their share prices.

### 1.7.3 Other financial assets

As part of group activities, EDF grants short-term loans in foreign currencies to its subsidiaries. In order to reduce exposure to foreign exchange risks, the Group mainly finances these loans by short-term commercial paper issues in foreign currencies and in Euros, together with the use of currency hedging derivatives.

## 1.8 Inventories and work-in-progress

The initial cost of inventories includes the direct material costs (including the effect of hedging), labor costs and overheads incurred to bring the inventories to their current condition and location. They are subsequently measured at weighted average cost.

### 1.8.1 Nuclear fuel and materials

Inventories of nuclear fuel and materials comprise fissile materials in various stages of production, and fuel in the reactor and stored. The processing cycle for nuclear fuels is longer than one year.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labor and subcontracted services (*e.g.* fluoration, enrichment, etc.).
The cost of inventories for fuel in reactors but not yet irradiated includes expenses for management of spent fuel and the long-term management of radioactive waste. The corresponding amounts are taken into account in the relevant provisions.

Interest expenses incurred in financing inventories of nuclear fuels are charged to expenses for the period.

These items are valued using the weighted average cost method, applied to each component (natural uranium, fluoration, enrichment, fuel assembly production).

EDF does not value the uranium obtained from processed fuel, due to uncertainty over its future use.

Nuclear fuel consumption is determined for each component based on forecasts of quantities used per kWh produced. These quantities are valued at weighted average cost of inventories.
Inventories are periodically corrected in view of forecast burnt quantities based on neutronic measurements.

### 1.8.2 Other fuels

The inventories of other fuels consist of fossil materials required for operation of the fossil-fired plants.

These inventories are measured using the weighted average cost method, applied to each component.

### 1.8.3 Operating materials and equipment

These inventories are measured at weighted average cost. Direct and indirect purchasing costs are included in the initial cost.

Provisions concerning spare parts supplied under a maintenance program are based on the turnover of these parts and the useful lives of generation units.

Safety spare parts used for nuclear power plants that require specific delivery times, production specifications and utilization are included in property, plant and equipment.

### 1.8.4 Gas held for trading

Inventories are valued at weighted average cost including direct and indirect purchasing costs, principally transmission costs.
Impairment of these inventories is determined based on the net realizable value, *i.e.* the future sale price.

## 1.9 Accounts receivable and marketable securities

### 1.9.1 Trade receivables

Trade receivables are stated at nominal value.

Trade and other receivables also include revenue based on an estimate of energy delivered and measured but not yet billed, and energy delivered and not yet measured or billed

A provision is recorded to cover the future cost of energy not yet measured or billed.

A provision is recorded when the carrying amount, based on the probability of recovery, assessed statistically or on a case-by-case basis depending on the type of receivable, is lower than book value. The risk associated with doubtful receivables is evaluated individually.

### 1.9.2 Marketable securities

Marketable securities are initially recorded as assets at acquisition cost, and restated at their value in use at year-end.
For listed securities, the value in use is equal to the year-end stock market price. For unlisted securities, the value in use is the probable trading value taking the company's growth prospects into consideration.
A provision is recorded to fully cover any unrealized losses, without netting against unrealized gains.
Gains and losses on sales of marketable securities are valued using the FIFO (first in first out) method.

Treasury shares purchased for attribution to employees under a specified plan are also classified as marketable securities. From the date of application of CNC opinion 2008-17 of November 6, 2008 impairment based on market price is no longer recognized in respect of treasury shares.

## 1.10 Deferred charges

Bond redemption premiums are amortized on a straight-line basis over the term of the related bond (or each tranche of the bond to maturity in the case of serial bonds).

Commissions and external costs paid by EDF upon issuance of borrowings are spread on a straight-line basis over the term of the related instruments.

## 1.11 Translation of receivables and payables in foreign currencies

Foreign currency receivables and payables are translated into Euros at the year-end exchange rates. The resulting translation differences are recorded in the balance sheet in other receivables and other liabilities under "Unrealized foreign exchange gains" and "Unrealized foreign exchange losses".

Provisions are recorded to cover all unrealized exchange losses on foreign currency borrowings not hedged for exchange risks. Unrealized gains are not included in the income statement.

Translation differences with respect to swaps hedging foreign currency borrowings are recorded under "Unrealized foreign exchange gains" and "Unrealized foreign exchange losses" as an offsetting entry to "Cash Instruments".

## 1.12 Tax regulated provisions

The following items are recorded under this heading:

- excess depreciation on generation, transmission and distribution facilities computed using the declining-balance method;
- accelerated depreciation on the chimney sulfur removal facilities of fossil-fired plants;
- excess depreciation on software developed in-house by the company.

## 1.13 Special concession accounts

These liabilities relate mostly to public electricity distribution concessions for the Island Energy Systems, and hydropower concessions.

### RECOGNITION OF SPECIAL PUBLIC DISTRIBUTION CONCESSION LIABILITIES

These liabilities represent the contractual obligations specific to the concession rules, as reported annually to the grantor:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities – the net book value of assets operated under concession – less any as yet unamortized financing provided by the operator;
- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement. These non-financial liabilities are recorded under the following headings:
  - depreciation recorded on the portion of assets financed by the grantor,
  - provision for renewal, generally based on the difference between the replacement value at year-end and the historical value of the assets, concerning only assets due for renewal before the end of the concession; the annual allocations to the provision correspond to the difference between the replacement value as remeasured at each year-end, and the historical value, less any existing provisions. The net amount is spread over the residual useful life of the assets. This provision is included in provisions for expenses.

When assets are replaced, the provision and amortization of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

The valuation of concession liabilities is subject to uncertainty in terms of cost and disbursement dates.

### RECOGNITION OF SPECIAL HYDROPOWER CONCESSION LIABILITIES

These liabilities comprise:
- the value of assets remitted for nil consideration and contributions received;
- differences arising from revaluations in accordance with French legislation for fixed assets put into service before January 1, 1959 and before January 1, 1977;
- and since January 1, 2009 (when implementation decree 2008-1009 of September 26, 2008 came into force – see note 2.1) additional depreciation booked for facilities that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term (see notes 1.2 and 2.1). This additional depreciation is based on the share of the assets' net book value at the end of the concession financed by the concession operator.

The net revaluation reserve generated by the 1976 revaluation is taken to income over the residual useful life of the assets concerned.

The value of assets remitted for nil consideration and contributions received are transferred to the income statement over their useful lives.

## 1.14 Provisions for risks and expenses

EDF recognizes provisions for risks and expenses if the following three conditions are met:
- EDF has a present obligation (legal or constructive) towards a third party that arises from a past event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the value of the obligation can be estimated reliably.

Provisions are determined based on EDF's estimate of the expected cost necessary to settle the obligation. Estimates are based on management data from the information system, assumptions adopted by EDF, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

The company records any changes in estimates on long-term provisions as required by CRC regulation 2000-06 and Emergency Committee regulation 2005-H.

The proceeds from expected asset disposals are not taken into account in calculating provisions, even if these disposals are closely linked to events which gave rise to the provisions.

If it is anticipated that all or part of the expenses necessary to settle an obligation covered by a provision will be reimbursed, the reimbursement is recognized under receivables if and only if the company is virtually certain of receiving it.

It may very rarely happen that a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources. Contingent assets and liabilities are not recorded.

The provisions for risks and expenses mainly cover the following:
- unrealized foreign exchange losses;
- the future cost related to energy not yet measured or billed;
- future losses relating to multi-year agreements for the purchase and sale of electricity or gas:
  - losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast price of electricity on the European market,
  - losses on electricity sale agreements are measured by comparing the estimated income under the contractual terms with the cost of generating the energy to be supplied, based on the cost of nuclear power generation,
  - losses on gas sale agreements are measured by comparing the estimated income under the contractual terms with the cost of supplying the energy;
- costs of renewal of facilities operated under distribution concessions;
- back-end nuclear cycle expenses: provisions for spent fuel management and for the long-term radioactive waste management are booked for all fuels. This provision concerns all fuel in reactors, regardless of the extent of irradiation; it also covers management expenses for radioactive waste resulting from decommissioning of nuclear plants;
- costs of decommissioning power plants and the costs relating to fuel in the reactor when the reactor is shut down (provision for last cores);
- costs of 10-year inspections of nuclear and fossil-fired power plants.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and for future losses relating to multi-year energy purchase and sale agreements are estimated by applying a forecast long-term inflation index to the projected disbursements, which are then discounted at rates that reflect the best estimate of a long-term rate of return on bond markets.

The rate of inflation and the discount rate are based on economic parameters specific to France.

This discount rate is determined based on long series data for a sample of bonds, and takes into account the fact that some expenses covered by provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The discount effect generated at each closing to reflect the passage of time is included in financial expenses.

The impact of changes in estimates for long-term provisions with associated balance sheet assets, whether due to schedule changes, discount rate changes, new expense estimates or technological developments, is allocated to the relevant assets, with any excess allocated to the underlying asset (power plant).

# 1.15 Provisions and obligations for employee benefits

EDF employees are entitled to benefits both during and after their employment, in accordance with the statutory regulations for companies in the electricity and gas sector (IEG) in France.

## 1.15.1 Pension and post-employment benefit obligations

EDF's pension and post-employment obligations resulting from the special electricity and gas sector (IEG) pension system are described individually in the note on "Employee Benefits".

## 1.15.2 Other long-term benefit obligations

These benefits concern EDF employees currently in service who are covered by the IEG regime, and are earned according to the statutory regulations for the electricity and gas sector. They are described in the note on "Employee Benefits".

## 1.15.3 Calculation and recognition of employee benefits

In application of the CNC Emergency Committee opinion 2000-A issued on July 6, 2000 and article 355.1 paragraph 2 of the General Chart of Accounts, EDF opted for recognition of post-employment benefits granted to personnel as of January 1, 2005.

The actuarial value of all commitments is calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end to pensions, post-employment benefits and long-term benefits, taking into consideration each country's specific economic conditions and expected wage increases.

In calculating pensions and other post-employment benefit obligations, this method takes the following factors into consideration, in compliance with CNC recommendation 2003-R01:

- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- retirement age, determined on the basis of the applicable provisions (such as years of service and number of children, taking into account the prolongation of the employee contribution period to qualify for a full pension);
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data;
- reversion pensions, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate observed for the population of employees in the electricity and gas sector;
- a nominal discount rate, depending on the duration of the obligations. In keeping with the provisions booked in the EDF group's consolidated financial statements, the rate applied was 5% at January 1, 2004.

The provision takes into account the value of the assets that cover certain obligations, which are deducted from the value of the obligation as determined above.

In accordance with the applicable accounting regulations:

- any actuarial gain or loss on pensions and post-employment benefit obligations in excess of 10% (the "corridor") of the obligations or fund assets, whichever is the highest, are recognized in the income statement progressively over the average residual working life of the company's employees;
- the provision for other long-term benefits is calculated under a simplified method. Therefore, if an actuarial estimation under the projected unit credit method is necessary, any actuarial variance and the past service cost are directly included in the provision, without application of the "corridor" rule.

The expense booked for employee benefit obligations includes:

- the cost of additional vested benefits, and the financial discount cost on existing benefits;
- the income corresponding to the expected return on plan assets;
- the income or expenses resulting from amortization of actuarial gains or losses.

Entitlements earned during the year are added to the provision and discounting costs are included in financial expenses.

# 1.16 Derivatives

## 1.16.1 Short-term foreign exchange rate derivatives

Short-term foreign exchange rate derivatives comprise:
- currency options;
- currency swaps;
- forward currency contracts.

Gains and losses on instruments designated as hedges are recorded in the income statement symmetrically to the income and expenses recognized in respect of the hedged item.
This treatment applies to currency swaps used to hedge fuel supplies contracted in foreign currencies.

The treatment for instruments not qualifying as hedges is as follows:
- derivatives traded on organized or similar markets are stated at fair value at the year-end. The unrealized foreign exchange gains and losses are recorded in the financial result;
- for derivatives traded over the counter, a provision is recorded for unrealized losses and unrealized gains are not recognized;
- premiums paid or received on currency options are recognized in income at settlement.

Instruments outstanding at the year-end are included in off balance sheet commitments at the nominal value of the contracts.

## 1.16.2 Long-term interest rate and foreign exchange rate derivatives

One of the main objectives of exchange rate and interest rate risk management is to minimize their impact on equity and net income. For exchange rate risks, debts are as far as possible entered into in the local currency of the entity (parent company or subsidiary). If a transaction is undertaken in a different currency, a hedging policy (matching assets and liabilities) is set up wherever possible.

Long-term instruments consist of interest rate swaps and currency swaps.

Derivatives used in a hedging relationship are taken into account to adjust the foreign exchange result and interest expenses on a debt. If the exchange rate risk is totally hedged, no provision is recorded. If the risk is only partly hedged, a provision equivalent to the total unhedged unrealized exchange loss is recorded.

If no hedging relationship exists:
- derivatives traded on organized or similar markets are stated at fair value at the year-end. The unrealized foreign exchange gains and losses are recorded in the financial result;
- for derivatives traded over the counter, a provision is established for unrealized losses and unrealized gains are not recognized.

Instruments outstanding at the year-end are included in off balance sheet commitments at the nominal value of the contracts.

# 1.17 Commodity contracts

Forward financial instruments on commodities are traded for hedging purposes. Gains and losses on these operations are included in sales or in the cost of energy purchases, depending on the nature of the hedged item.

## 1.18 Free shares

For the attribution of free shares to employees, a provision is established in respect of the obligation to deliver the shares, taking into consideration the services rendered by the employee. The value of the provision is based on:

- estimates of the number of shares to be remitted to employees;
- the acquisition price of shares already acquired, less any impairment recognized on those shares;
- the market price of shares still to be acquired or the forward price plus the premium paid if the company has acquired purchase options for treasury shares.

This provision is remeasured at each year-end prior to delivery of the shares, and is reversed when the shares are remitted to employees.

# Note 2 Regulatory events in 2009 with an impact on the financial statements

## Hydropower concessions

Article 7 of law 2006-1772 of December 30, 2006 on water and aquatic environments removed the outgoing operator's preferential right instituted by the law of October 16, 1919 on the use of hydropower.

Article 33 of the law 2006-1771 of December 30, 2006 amending the France's 2006 Finance Act sets out the principle of an indemnity payable to the outgoing operator in respect of the unamortized portion of investments made by the operator during the second half of the agreement (or a minimum 10-year period), with the exception of investments required to return the assets in good condition at the end of the concession.

The implementation decree 2008-1009 of September 26, 2008 clarifies the terms of indemnification for work carried out during the second half of the concession and prior to the publication of the decree. As required by this decree, EDF submitted a statement of the relevant expenses to the ministry of Ecology, Energy, Sustainable Development and the Sea, for approval early in 2009, and its claim is currently being processed by the administration.

In view of these changes in regulations, additional depreciation has been booked since January 1, 2009 for facilities that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term. This additional depreciation is recorded in expenses with a corresponding entry under the grantor's rights in the balance sheet liabilities, to complement industrial depreciation of the assets such that the concession operator's share of the net book value is fully depreciated over the residual term of the concession.

The liability corresponding to subsidies and assets supplied for nil consideration is now estimated on the basis of the net book value in the balance sheet assets, and amortized over their technical useful life.

This additional depreciation generated an additional €15 million expense for 2009, while reversals of subsidies generated exceptional income of €80 million.

# Note 3 Significant events and transactions in 2009



In addition to the events described in note 2, the main events and transactions in 2009 with a definite or potential significant impact on the financial statements are as follows:

## 3.1 Alpiq and contribution of the Emosson drawing rights

On December 19, 2008, the Swiss energy groups Atel and EOSH announced their intention to merge to form an entity named Alpiq Holding SA, with the aim of creating a new energy operator in Switzerland. Under the terms of agreements between EDF, EOSH and CSM (the consortium of long-standing shareholders in Atel Holding), EDF's share in Alpiq Holding SA reached 25% by the end of January 2009.

In accordance with this agreement, on January 27, 2009 EDF contributed to Alpiq its 50% share in rights to power and energy deriving the Emosson hydroelectric facility over the residual term of existing concessions, for the sum of 722 million Swiss francs (€481 million, included in exceptional income in 2009).

In consideration of this contribution in kind EDF received 1,187,511 shares in Alpiq Holding SA, which it sold to EDF International on February 9, 2009.

## 3.2 Bond issues

EDF issued several long-term bonds in 2009 for French and international institutional investors, with a total value of €13.6 billion.

On June 17, 2009 EDF also issued a retail bond for private investors. This bond bears interest at the fixed rate of 4.5% and will be fully redeemed at the end of a 5-year period. €3.3 billion had been raised by the time the subscription period closed on July 6, 2009.

## 3.3 British Energy

On January 5, 2009 on completion of the purchase offer made on November 2008, Lake Acquisitions Ltd., a wholly-owned EDF subsidiary *via* EDF International, took control of British Energy. The acquisition was essentially financed initially by a syndicated bank loan subscribed by EDF. Drawings totalling £7,344 million were made on this loan in January 2009.

On November 26, 2009, the EDF group and Centrica plc finalized the agreement announced in May 2009 for the acquisition by EDF of Centrica's 51% holding in the Belgian electricity operator SPE-Luminus, and the acquisition by Centrica of 20% of Lake Acquisitions Ltd. and a 20% investment in the EDF project company set up to build new nuclear power plants in the United Kingdom.

After completion of various refinancing operations, EDF had fully repaid the syndicated bank loan, subscribed to a €7,979 million capital increase by EDF International and a €3,087 million capital increase by C3, a wholly-owned EDF subsidiary. C3 holds the shares of EDF Investissements Groupe, which carries out financing operations for EDF group subsidiaries.

## 3.4 Interim dividend and change in the capital structure

On November 5, 2009 the Board of Directors decided to pay an interim dividend in respect of 2009, in the form of cash or new shares with an issue price of €35.13.

Settlement on December 17, 2009 of the interim dividend in the form of shares led to a €13 million increase on the share capital following issuance of 26,695,572 new shares with an issue premium of €923 million (net of issuance expenses).

## 3.5 Acquisition of Constellation Energy Nuclear Group

EDF Development Inc., a subsidiary of EDF International, and Constellation Energy Group (CEG), announced on December 17, 2008 that they had reached an agreement under which EDF Development Inc. would acquire a 49.99% interest in Constellation Energy Nuclear Group, an entity managing all CEG's nuclear generation activities, for $4.5 billion.

Under the terms of this agreement, EDF Development Inc. strengthened CEG's liquidity position through an immediate $1 billion cash payment in CEG through subscription of non-convertible preferred stock. This contribution was financed by a €851 million loan from EDF to EDF International.

Once all the required authorizations had been issued, acquisition of 49.99% of Constellation Energy Nuclear Group was finalized on November 6, 2009.

The preferred stock, amounting to $1 billion, was surrendered to CEG in the form of a credit against the purchase price. EDF issued a further loan of €2,489 million to EDF International.

## 3.6 Acquisition of SPE

Following the agreement signed in May 2009 between EDF and Centrica, on November 12, 2009 the European Commission approved the acquisition by EDF Belgium of Centrica's 100% share in Segebel, which owns 51% of SPE, a producer and supplier of electricity and gas in Belgium. The total value of the transaction was €1.3 billion.

EDF thus sold EDF Belgium to EDF International for €205 million, made a €815 advance to EDF International and raised the capital of C3 by €510 million.

## 3.7 Agreements between EDF, EnBW and E.ON

On September 30, 2009, EDF, EnBW and E.ON signed agreements for exchanges of drawing rights and electricity generation assets for more than 1,200 MW between France and Germany.

Under the terms of these agreements, on December 30, 2009 EDF transferred its 18.75% investment in SNET to E.ON for the sum of €193 million.

On January 1, 2010, EnBW then acquired:

- drawing rights for 800 MW of nuclear energy in Germany from E.ON's nuclear fleet;
- E.ON's majority shareholding in the Rostock coal-fired plant with power of 256 MW;
- drawing rights for 159 MW from the Buschhaus coal-fired plant.

In return, E.ON acquired a drawing right to 800 MW of nuclear power in France, deriving from existing drawing rights held by EnBW in respect of EDF's nuclear output.

## 3.8 Cancellation of the European Commission's decision of December 16, 2003

A European Court ruling of December 15, 2009 cancelled the European Commission's decision of December 16, 2003 which had declared that EDF's non-payment in 1997 of income taxes on the utilized portion of provisions for renewal of French national grid facilities recorded under "grantor's rights" should be classified as State aid, and ordered its recovery by the French State.

In application of this decision, which is open to appeal until March 1, 2010, on December 30, 2009 the State returned to EDF the sum of €1,224 million, corresponding to the amount paid by EDF to the State in 2004.

As the transmission and distribution activities were transferred to subsidiaries in 2005 and 2007 respectively, EDF, RTE EDF Transport and ERDF share the rights to this reimbursement, and EDF will thus pass on the relevant amounts to RTE EDF Transport and ERDF.

EDF has therefore recorded a €526 million liability at December 31, 2009, comprising €332 million for RTE EDF Transport and €194 million for ERDF. EDF's own share of the reimbursement was recorded as financial income of €191 million (corresponding to repayment of the interest paid for 1997-2004) and tax income of €507 million (corresponding to repayment of the principal).

# Note 4 Sales

Sales are comprised of:

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Sales of energy [1] | 37,014 | 37,062 |
| Sales of goods and services | 1,881 | 1,941 |
| **SALES** | **38,895** | **39,003** |

*(1) Including a portion corresponding to transport in sales of electricity and gas.*

Sales showed a slight downturn of 0.28% from 2008, principally as the result of:
- a decline in electricity sales to the subsidiary EDF Trading and auction sales;
- partly offset by a rise in electricity sales revenues in France, primarily reflecting the regulated tariff increases on August 15, 2008 and August 15, 2009.

# Note 5 Operating subsidies

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **OPERATING SUBSIDIES** | **2,672** | **1,874** |

Operating subsidies mainly comprise the subsidy received or receivable by EDF in respect of the "Contribution to the Public Electricity Service" (CSPE) introduced by law 2003-8 of January 3, 2003. This contribution is payable by end-users and collected by network operators or electricity suppliers, which then pay it to the *Caisse des Dépôts et Consignations*. It is intended to offset the surplus costs resulting from purchase obligations, excess generation costs in zones not connected to the mainland network, and the costs of the basic necessity tariff (*produit de première nécessité*) and poverty and vulnerability action measures (*dispositif pauvreté et précarité*).

In the financial statements, this compensation results in recognition of income of €2,663 million for 2009 (€1,866 million for 2008). This change is largely explained by the decline in market prices for electricity since the end of 2008, which caused a rise in the subsidy for purchase obligations.

# Note 6 Reversals of provisions, amortization and depreciation

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **Reversals of provisions for risks** | **124** | **118** |
| Pensions and similar obligations | 755 | 1,101 |
| Renewal of property, plant and equipment operated under concession | 1 | 4 |
| Spent fuel management (1) | 725 | 2,955 |
| Long-term radioactive waste management | 140 | 134 |
| Decommissioning of power plants | 221 | 304 |
| Last cores | - | 111 |
| Other provisions for expenses (2) | 1,577 | 743 |
| **Reversals of provisions for expenses** | **3,419** | **5,352** |
| **Reversals of amortization of grantor's financing** | **-** | **4** |
| **Reversals of impairment** | **168** | **118** |
| **TOTAL** | **3,711** | **5,592** |

*(1) Including € 2,300 million in 2008 as a result of the EDF-AREVA framework agreement, corresponding to recognition in expenses of the full payment for decommissioning the plant at La Hague in north-west France.*

*(2) Including a € 1,351 million reversal in 2009 from the provision for the transition tariff (TaRTAM) (€ 497 million in 2008).*

# Note 7 Other operating income

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **OTHER OPERATING INCOME** | **897** | **1,034** |

Other operating income mainly consist of the greenhouse gas emission quotas allocated for the current year by the French State and used by EDF, in application of the CNC Emergency Committee opinion 2004-C of March 23, 2004. The € 153 million decrease in quotas is mainly explained by lower quota prices.

# Note 8 Purchases and other external expenses

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Fuel purchases used | 2,820 | 2,457 |
| Energy purchases | 9,821 | 9,495 |
| Other purchases used (1) | 1,107 | 3,227 |
| Services (2) | 16,408 | 15,881 |
| **PURCHASES AND OTHER EXTERNAL EXPENSES** | **30,156** | **31,060** |

*(1) Following signature of the EDF-AREVA framework agreement on December 19, 2008, the full payment of € 2,300 million due for dismantling the La Hague plant was recognised in expenses in 2008.*

*(2) This item notably consists of distribution network access fees invoiced by the subsidiary ERDF. The increase in 2009 is mainly attributable to bond issuance expenses.*

# Note 9 Taxes other than income taxes

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Taxes on salaries and wages | 116 | 110 |
| Energy-related taxes (1) | 1,301 | 882 |
| Business taxes | 909 | 807 |
| Property taxes | 268 | 254 |
| Other taxes | 305 | 307 |
| **TAXES OTHER THAN INCOME TAXES** | **2,899** | **2,360** |

*(1) A contribution of € 850 million was booked in 2009 (€ 426 million in 2008) in connection with the transition tariff (TaRTAM).*

# Note 10 Personnel expenses

## Personnel expenses

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Salaries and wages | 3,265 | 3,178 |
| Social contributions | 2,025 | 1,917 |
| **PERSONNEL EXPENSES** | **5,290** | **5,095** |

Apart from changes in workforce numbers and salaries, the increase in personnel expenses in 2009 chiefly results from introduction of complementary welfare coverage and an additional pension plan for IEG employees from January 1, 2009.

## Average workforce

| | 2009 | | | 2008 |
|---|---|---|---|---|
| | IEG status | Other | Total | Total |
| Executives | 21,923 | 267 | 22,190 | 20,975 |
| Operational, supervisory and technical staff | 37,311 | 337 | 37,648 | 38,156 |
| **AVERAGE WORKFORCE** | **59,233** | **604** | **59,837** | **59,131** |

Average workforce numbers are reported on a full-time equivalent basis.

# Note 11 Depreciation and amortization

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Amortization of intangible assets | 92 | 90 |
| Depreciation on property, plant and equipment | | |
| Owned by EDF | 1,564 | 1,481 |
| Operated under concession (1) | 191 | 169 |
| **Sub-total** | **1,755** | **1,650** |
| **Total depreciation and amortization on fixed assets** | **1,847** | **1,740** |
| **Amortization of bond issuance expenses and other capitalized expenses** | **14** | **2** |
| **TOTAL** | **1,861** | **1,742** |

*(1) Depreciation concerns the hydropower concessions and public distribution concessions for the Island Energy Systems.*

# Note 12 Provisions

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **Provisions for risks** | **76** | **53** |
| Pensions and similar obligations | 398 | 448 |
| Renewal of assets operated under concession | 19 | 13 |
| Management of spent nuclear fuel | 368 | 413 |
| Long-term management of radioactive waste | 17 | 21 |
| Decommissioning of fossil-fired power plants | 79 | 127 |
| Other provisions for expenses (1) | 649 | 1,501 |
| **Provisions for expenses** | **1,530** | **2,523** |
| **Provisions for depreciation** | **206** | **258** |
| **TOTAL** | **1,812** | **2,834** |

*(1) Including an additional allocation of € 501 million to the provision for the transition tariff (TaRTAM) in 2009 (€ 1,351 million in 2008).*

# Note 13 Other operating expenses

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Greenhouse gas emissions (1) | 286 | 396 |
| Other operating expenses | 722 | 1,048 |
| **TOTAL** | **1,008** | **1,444** |

*(1) The decrease in greenhouse gas emission quotas expenses essentially results from the decline in quota prices.*

# Note 14 Financial result

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Expenses on long-term financial liabilities [1] | (1,438) | (823) |
| Expenses on short-term financial liabilities [1] | (693) | (22) |
| Net charges on sales of marketable securities | (70) | (30) |
| Income from other securities and receivables related to fixed assets | 814 | 644 |
| Income on short-term financial receivables | 45 | 205 |
| Net income on sales of marketable securities | 113 | 75 |
| **Net Financial Costs** | **(1,229)** | **49** |
| Realized exchange losses [2] | (4,058) | (1,797) |
| Realized exchange gains [2] | 4,223 | 1,751 |
| **Foreign exchange result** | **165** | **(46)** |
| Other financial income and expenses | 309 | (324) |
| Allocations to amortization and provisions on financial items [3] | (2,371) | (4,781) |
| Financial income from investments [4] | 715 | 1,572 |
| Reversals of provisions and transfers of charges [5] | 2,484 | 373 |
| **Other financial income and expenses** | **1,137** | **(3,160)** |
| **FINANCIAL RESULT** | **73** | **(3,157)** |

*(1) The increase in expenses relates to changes in financial liabilities as detailed in notes 33 and 34.*

*(2) In 2009, foreign exchange gains and losses principally relate to operations in the United Kingdom.*

*(3) This item includes the discount expenses for long-term provisions (nuclear and employee benefit provisions) and increases in provisions for unrealised foreign exchange losses. In 2008, it included impairment on dedicated assets (€ 1,408 million) and on shares of EDF International (€ 396 million).*

*(4) In 2008, € 581 million of dividends were received from EDF International, but there was no equivalent transaction in 2009.*

*(5) Mostly reversals from provisions on EDF International shares (€ 612 million) and Italenergia bis shares (€ 115 million), dedicated assets (€ 793 million) and foreign exchange losses (€ 505 million).*

# Note 15 Exceptional result

**In 2009**, exceptional items resulted in net income of €987 million, the main items of which are the following:

- transfer of drawing rights for energy valued at €481 million from the jointly-operated Emosson dam to Alpiq in return for shares in Alpiq, then sale of those shares to EDF International;
- reversal of €80 million of subsidies received for construction of hydropower facilities operated under concession, following adjustment of the value of the grantor's rights as a consequence of the law of December 30, 2006 on water;
- disposals of items of property, plant and equipment generating a capital gain of €25 million;
- net reversals of accelerated tax depreciation on property, plant and equipment and intangible assets amounting to €179 million;
- reversals of additional depreciation generated by the 1976 revaluation, amounting to €32 million;
- operations related to the delivery of free shares to employees in August 2009 under the free share plan initiated in 2007, representing a net expense of €53 million;
- a capital gain of €265 million on disposals of shares in EDF Belgium and SNET.

**In 2008**, exceptional items resulted in net income of €237 million, the main items of which are the following:

- disposal of shares in ArcelorMittal, generating a capital gain of €121 million;
- net reversals of accelerated tax depreciation on property, plant and equipment and intangible assets amounting to €88 million;
- reversals of additional depreciation generated by the 1976 revaluation, amounting to €32 million;
- disposals of items of property, plant and equipment generating a capital gain of €22 million, related to real estate sales.

# Note 16 Income taxes



## 16.1 Tax Group

Since January 1, 1988, EDF and certain subsidiaries have formed a group subject to the tax consolidation system existing under French tax legislation (articles 223A to 223U of the French Tax Code). The tax consolidation group comprises 53 subsidiaries in 2009, including RTE EDF Transport, ERDF and EDF International.

# 16.2 Income tax payable

Under article 223A of the French Tax Code, EDF, as the head of the tax consolidated group, is the sole entity responsible for payment of income taxes and additional related contributions.

The tax consolidation agreement between the members of the tax group stipulates that the arrangement must be neutral in effect. In application of this principle, each subsidiary pays the consolidating company a contribution to the group income tax equivalent to the tax it would have paid had it been taxed separately.

The tax consolidation agreement between EDF and the subsidiaries included in the tax group requires EDF to reimburse loss-making subsidiaries for the tax saving generated by their losses, as and when the entities concerned make taxable profits.

In 2009, the tax group generated taxable profit. The income tax payable for the tax group amounts to €847 million.

The company at the head of the tax group, EDF, recorded an income tax expense of €401 million. As EDF is the head of the tax group, the breakdown is as follows:

- €662 million for the taxable profit of 2009;
- €255 million for the net exceptional income;
- €(13) million for adjustments resulting from the tax consolidation;
- €4 million for adjustments relating to the previous year;
- €(507) million for the reimbursement by the French State of the amount paid in 2004 following the European Commission's decision of December 16, 2003.

In 2008 and 2009 EDF underwent a tax inspection covering tax years 2004, 2005 and 2006. At the end of 2009, the Company was notified of a proposed tax reassessment for the period inspected. EDF is contesting most of the corrections notified.

# 16.3 Deferred taxes

Deferred taxes are not recognized in the individual accounts of EDF.

- Deferred taxes result from differences between the accounting bases and tax bases of items. They generally arise as a result of timing differences in the recognition of income and expenses.
- Deferred tax assets reflect expenses which will be tax deductible in future years or losses carried forward which will reduce taxable income in the future.
- Deferred tax liabilities reflect either advance tax deduction of future accounting expenses or accounting revenues that will be taxable in future years and will increase the tax basis.

Changes in deferred taxes are as follows:

| *(in millions of Euros)* | **2009** | 2008 | Change |
|---|---|---|---|
| **Timing differences generating a deferred tax asset** | | | |
| Non-deductible provisions (1) | **(11,521)** | (12,968) | 1,447 |
| Financial instruments and unrealized exchange gains | **(2,261)** | (2,011) | (250) |
| Other | **(213)** | (145) | (68) |
| **Total deferred tax assets subject to the standard rate** | **(13,995)** | **(15,124)** | **1,129** |
| **Timing differences generating a deferred tax liability** | | | |
| Financial instruments and unrealized exchange losses | **2,827** | 3,342 | (515) |
| Other | **-** | 10 | (10) |
| **Total deferred tax liabilities subject to the standard rate** | **2,827** | **3,352** | **(525)** |
| Capital gains not yet taxed, net of capital losses | **79** | 79 | - |
| **Total deferred tax liabilities subject to reduced rate** | **79** | **79** | **-** |
| **Deferred taxes** | **(11,089)** | **(11,693)** | **604** |
| Net future tax asset at standard rate | **(3,848)** | (4,058) | 210 |
| Net future tax liability at reduced rate | **1** | 1 | - |

*(1) Mainly concerning post-employment benefits granted to personnel.*

# Note 17 Gross values of intangible and tangible fixed assets

| *(in millions of Euros)* | Gross value at 12.31.2008 | Increases | Decreases | Gross value at 12.31.2009 |
|---|---|---|---|---|
| Software | 413 | 77 | 113 | 377 |
| Other (1) | 634 | 475 | 548 | 561 |
| **Intangible assets** | **1,047** | **552** | **661** | **938** |
| Land | 130 | 3 | 9 | 124 |
| Buildings | 8,906 | 151 | 32 | 9,025 |
| Nuclear power plants | 45,065 | 700 | 321 | 45,444 |
| Machinery and plant other than networks | 9,247 | 336 | 70 | 9,513 |
| EDF-owned networks | 579 | 28 | - | 607 |
| Other | 984 | 92 | 83 | 993 |
| **Property, plant and equipment owned by EDF** | **64,911** | **1,310** | **515** | **65,706** |
| Land | 37 | - | 1 | 36 |
| Buildings | 8,374 | 52 | 16 | 8,410 |
| Machinery and plant other than networks | 971 | 6 | 5 | 972 |
| Concession networks | 1,769 | 115 | 7 | 1,877 |
| Other | 11 | - | - | 11 |
| **Property, plant and equipment operated under concession (2)** | **11,162** | **173** | **29** | **11,306** |
| Tangible assets (3) | 3,078 | 2,931 | 1,442 | 4,567 |
| Intangible assets | 500 | 322 | 83 | 739 |
| Advances and progress payments on orders | 739 | 327 | - | 1,066 |
| **Assets in progress** | **4,317** | **3,580** | **1,525** | **6,372** |
| **TOTAL** | **81,437** | **5,615** | **2,730** | **84,322** |

*(1) The € 475 million increase includes € 222 million related to greenhouse gas emission quotas allocated by the French State in December 2009, and the € 548 million decrease comprises € 283 million for 2008 quotas surrendered to the State in 2009.*

*(2) Assets operated under concession belong to the Island Energy Systems and hydropower concessions.*

*(3) Investments in 2009 mainly concerned nuclear equipment for existing plants, construction of the EPR at Flamanville and renovation of fossil-fired plants.*

Most of the value of fixed assets commissioned during the year is recorded as a decrease in assets in progress.

# Note 18 Depreciation, amortization and provisions on intangible and tangible fixed assets

| *(in millions of Euros)* | 2008 | Increases | Decreases | 2009 |
|---|---|---|---|---|
| Software | 215 | 76 | 124 | 167 |
| Other | 42 | 53 | 32 | 63 |
| **Intangible assets** | **257** | **129** | **156** | **230** |
| Buildings and land developments | 5,725 | 199 | 31 | 5,893 |
| Nuclear generation plants | 29,715 | 1,202 | 506 | 30,411 |
| Machinery and plant other than networks | 6,703 | 246 | 67 | 6,882 |
| EDF-owned networks | 251 | 18 | - | 269 |
| Other | 685 | 66 | 63 | 688 |
| **Property, plant and equipment owned by EDF** | **43,079** | **1,731** | **667** | **44,143** |
| Buildings and land developments | 5,075 | 120 | 11 | 5,184 |
| Machinery and plant other than networks | 729 | 14 | 5 | 738 |
| Concession networks | 667 | 51 | 5 | 713 |
| Other | 9 | 1 | - | 10 |
| **Property, plant and equipment operated under concession** | **6,480** | **186** | **21** | **6,645** |
| **TOTAL** | **49,816** | **2,046** | **844** | **51,018** |

# Note 19 Investments



## 19.1 Movements in investments

| *(in millions of Euros)* | Gross value at 12.31.2008 | Increases | Decreases | Change | Reclassification | Gross value at 12.31.2009 |
|---|---|---|---|---|---|---|
| Investments (1) | 33,426 | 8,195 | 519 | - | 4,680 | 45,782 |
| Receivables related to investments (2) | 2,236 | 11 | - | 272 | (2,500) | 19 |
| Investment securities (3) | 9,733 | 6,021 | 3,729 | - | - | 12,025 |
| Other investments | 154 | 78 | 198 | - | - | 34 |
| Loans | 131 | - | 48 | - | - | 83 |
| Loans to subsidiaries (4) | 7,195 | 15,685 | 11,916 | 206 | (2,163) | 9,007 |
| Other deposits and guarantees | 114 | 13 | 4 | - | - | 123 |
| **Total** | **52,989** | **30,003** | **16,414** | **478** | **17** | **67,073** |

| *(in millions of Euros)* | At 12.31.2008 | Increases | Decreases | Change | Reclassification | At 12.31.2009 |
|---|---|---|---|---|---|---|
| Provisions on investments and related receivables (5) | (925) | (22) | 727 | - | - | (220) |
| Provisions on investment securities (6) | (1,635) | (9) | 809 | - | - | (835) |
| Provisions on loans and other financial assets | (12) | - | 6 | - | - | (6) |
| **Total** | **(2,572)** | **(31)** | **1,542** | **-** | **-** | **(1,061)** |
| **NET VALUE** | **50,417** | | | | | **66,012** |

*(1) The net change in this item mainly results from:*
- *the capital increase by EDF International through a cash contribution of € 3,314 million and a capitalization of loans amounting to € 4,665 million (reclassification);*
- *the capital increase by C3 (€ 4,392 million), the holding company that owns the shares in EDF Investissements Groupe (EIG), the financing company for Group subsidiaries.*

*(2) The change in this item corresponds to capitalization in 2009, via EDF International, of the £2,123 million advance made to Lake Acquisitions to finance the purchase of British Energy shares.*

*(3) At December 31, 2009, this heading includes € 11,483 million of dedicated assets and € 473 million corresponding to a share portfolio set up to generate a satisfactory return in the medium to long term (mainly shares in Veolia Environnement).*
*The cash allocation to dedicated assets for 2009 amounted to € 1,902 million compared to € 1,785 million in 2008. In view of market conditions, these allocations were suspended from September 2008 and resumed in July 2009 once relative stability had returned to the financial markets. Withdrawals totalling € 302 million were made to cover EDF's cash needs, equivalent to disbursements in connection with the related obligations.*

*(4) Loans to subsidiaries at December 31, 2009 total € 9,007 million, including € 4,616 million for EDF International, € 2,924 million for RTE EDF Transport, € 823 million for EDF Energy, and € 540 million for EDF Énergies Nouvelles. Movements during the period mainly relate to operations undertaken for the takeover of British Energy.*

*(5) Reversals from provisions concern shares in EDF International (€ 612 million) and Italenergia bis (€ 115 million).*

*(6) The net change essentially results from reversals of provisions on dedicated assets (€ 783 million).*

# 19.2 Subsidiaries and investments of at least 50% of capital

| Name<br>*(in millions of Euros)* | Gross book value of shares owned | Impairment recorded at 12.31.2009 | % capital owned | Equity 2008 | Net income 2008 | Dividends received 2009 | Sales 2008 |
|---|---|---|---|---|---|---|---|
| **I. Subsidiaries** | | | | | | | |
| *** Holding companies** | | | | | | | |
| EDF Développement Environnement SA | 1,268 | - | 100 | 1,485 | 69 | - | 3 |
| EDF International | 21,288 | - | 100 | 11,413 | (232) | - | 1 |
| MNTC | 2,095 | - | 100 | 2,075 | 49 | 44 | - |
| EDF Production Électrique Insulaire SAS | 105 | - | 100 | 105 | (1) | - | - |
| EDF Holding SAS | 1,950 | - | 100 | 2,150 | 189 | 180 | - |
| Société C3 | 7,388 | - | 100 | 2,987 | 24 | - | - |
| Wagram 4 | 1,677 | - | 100 | 1,922 | 8 | - | n.m. |
| *** Real estate companies** | | | | | | | |
| La Gérante Générale Foncière | 471 | - | 100 | 388 | 30 | 30 | 22 |
| Société Foncière Immobilière de Location (SOFILO) | 937 | - | 100 | 762 | 49 | 61 | 126 |
| *** Industrial and commercial companies** | | | | | | | |
| **France** | | | | | | | |
| Centrale Électrique Rhénane de Gambsheim | 3 | - | 50 | 11 | n.m. | - | 4 |
| Richemont | 152 | 152 | 100 | 9 | - | - | 1 |
| Edenkia | n.m. | - | 50 | 1 | 1 | n.m. | 14 |
| Dalkia Investissement | 200 | - | 50 | 247 | 23 | 11 | 13 |
| RTE EDF Transport | 4,030 | - | 100 | 4,797 | 267 | 160 | 4,218 |
| Électricité Réseau Distribution France (ERDF) | 2,700 | - | 100 | 3,041 | 217 | 162 | 11,298 |
| **Other countries** | | | | | | | |
| Emosson | 14 | 14 | 50 | 89 | n.m. | - | 24 |
| Rheinkraftwerk Iffezheim (RKI) | 3 | - | 50 | 10 | n.m. | - | 5 |
| Forces Motrices du Chatelôt | 1 | - | 50 | 10 | n.m. | n.m. | 3 |
| *** Financial companies** | | | | | | | |
| Sapar Finance | 3 | - | 100 | 15 | n.m. | 2 | 1 |
| *** Other (EIG Eifer)** | 49 | 48 | - | - | - | - | - |
| **Total I** | **44,334** | **214** | **-** | **-** | **-** | **650** | **-** |

*n.m.: not material (less than € 500,000).*

# 19.3 Investments under 50% of capital

| Name<br>*(in millions of Euros)* | Gross book value of shares owned | Impairment recorded at 12.31.2009 | % capital owned | Equity 2008 | Net income 2008 | Dividends received 2009 |
|---|---|---|---|---|---|---|
| **Total I. Carried forward** | **44,334** | **214** | **-** | **-** | **-** | **650** |
| **II. Investments** | | | | | | |
| **II.1** Companies in which EDF has an interest of between 10% and 50% | | | | | | |
| *** Industrial and commercial companies** | | | | | | |
| **France** | | | | | | |
| Dalkia International | 425 | - | 24 | 1,814 | 25 | 1 |
| Dalkia Holding | 897 | - | 34 | 1,483 | 229 | 51 |
| **Total II.1** | **1,322** | **-** | **-** | **-** | **-** | **52** |
| **II.2** Companies in which EDF has an interest of less than 10% | | | | | | |
| AREVA | 123 | - | 2 | 3,508 | 1,036 | 6 |
| Other companies | 2 | - | - | - | - | 7 |
| **Other countries** | | | | | | |
| Force Motrice de Mauvoisin | 1 | - | 10 | 74 | 3 | n.m. |
| **Total II.2** | **126** | **-** | **-** | **-** | **-** | **13** |
| **Total II** | **1,448** | **-** | **-** | **-** | **-** | **65** |
| **Total investments, gross (I + II)** | **45,782** | **214** | **-** | **-** | **-** | **715** |
| **TOTAL INVESTMENTS, NET** | **45,568** | | | | | |

*n.m.: not material (less than € 500,000).*

# 19.4 Investment securities portfolio

| (in millions of Euros) | At start of year | | | At year-end | | |
|---|---|---|---|---|---|---|
| | Gross book value | Net book value | Estimated value | Gross book value | Net book value | Estimated value |
| **VALUE OF INVESTMENT SECURITIES** | **9,733** | **8,104** | **8,395** | **12,025** | **11,196** | **11,760** |

The investment securities portfolio is mainly comprised of dedicated assets. The dedicated asset portfolio is a highly specific means of covering long-term nuclear liabilities. The underlying principle, the way it is built up and the management and governance of the funds themselves are governed by the French law of June 28, 2006 on secure financing of nuclear expenses and its implementing provisions.

The law requires the full present cost of long-term nuclear obligations to be covered by 2011 and at all times after that date. This concerns decommissioning of existing plants and storage of all amounts of waste produced (spent fuel and fuel recovered from decommissioning).

These dedicated assets are clearly identified and managed separately from the company's other financial assets and investments. They are also subject to specific monitoring and control by the Board of Directors and the administrative authorities.

EDF's dedicated asset portfolio consists of diversified bond and equity instruments:

- certain dedicated assets take the form of Government bonds currently held and managed directly by EDF;
- the rest comprise specialized collective investment funds on leading international markets, managed by independent French or foreign asset management companies selected on the basis of solicited proposals or through a call for bids. These funds cover various segments of the bond or equities markets, with EDF aiming to achieve the broadest diversification possible, in the form of open-end funds and small numbers of "reserved" funds established solely for the use of the Group.

This portfolio is structured and managed on an index-based approach, following a strategic allocation defined by the Board of Directors and reported to the administrative authorities. The strategic allocation is designed to meet the overall objective of long-term coverage of obligations.

The dedicated investment fund portfolio breaks down as follows:

| (in millions of Euros) | 2009 | | 2008 | |
|---|---|---|---|---|
| | Net book value | Net asset value (1) | Net book value | Net asset value (1) |
| North American equities | 270 | 270 | 222 | 222 |
| European equities | 363 | 377 | 235 | 235 |
| Japanese equities | 20 | 20 | 19 | 19 |
| Worldwide bonds | 612 | 700 | 612 | 670 |
| **Total dedicated funds** | **1,265** | **1,368** | **1,088** | **1,146** |
| Other financial investments (direct or through investment funds) | 9,508 | 9,968 | 6,551 | 6,842 |
| **TOTAL DEDICATED ASSETS** | **10,773** | **11,336** | **7,639** | **7,988** |

*(1) Fair value includes unmatured accrued interest.*

# 19.5 Variation in treasury shares

| (in millions of Euros) | Gross value at 12.31.2008 | Increases | Decreases | Gross value at 12.31.2009 |
|---|---|---|---|---|
| **TREASURY SHARES** | **19** | **77** | **89** | **7** |

A total of 193,743 treasury shares held at December 31, 2009 are included in investment securities. These shares were acquired under a liquidity contract with an investment services provider.

# Note 20 Related companies



## 20.1 Relations with subsidiaries

| Companies | EDF's receivables [1] | | EDF's liabilities [1] | | Financial expenses | Financial income (excluding dividends) |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | Loans | Trade receivables | Net liabilities included in current account | Trade liabilities | | |
| RTE EDF Transport | 2,924 | 280 | - | 525 | - | 157 |
| EDF Energy | 823 | - | - | 78 | - | 9 |
| Lake Acquisitions | 64 | - | - | - | - | 341 |
| EDF Énergies Nouvelles | 540 | - | - | - | - | 7 |
| EDF International | 4,616 | - | - | - | - | 70 |
| ERDF | - | 82 | - | 3,156 | - | 1 |
| EDF Trading | - | 1,717 | - | 1,115 | - | 8 |
| Current account ERDF | - | - | - | 535 | (2) | - |
| Group cash management agreement with subsidiaries | - | - | 2,191 | - | (14) | - |
| Tax consolidation agreement [2] | - | - | - | 953 | - | - |
| Agreement for investment of subsidiaries' cash surpluses [3] | - | - | 3,456 | - | (66) | - |

*(1) Receivables and payables of more than € 50 million.*
*(2) Including EDF International (€ 618 million).*
*(3) Including ERDF's cash investments of € 2,000 million.*

## 20.2 Relations with the French State and state-owned entities

### 20.2.1 Relations with the French State

The French State holds 84.48% of the capital of EDF SA at December 31, 2009, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders. It appoints the Chairman of the Board of Directors.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, EDF is subject to certain inspection procedures, in particular economic and financial inspections by the French State, audits by the French Court of Auditors (*Cour des Comptes*) and Parliament, and verifications by the French General Finance Inspectorate (*Inspection Générale des Finances*).

Under an agreement entered into by the French State and EDF on July 27, 2001 concerning the monitoring of external investments, procedures exist for prior approval by or notification (advance or otherwise) of the French State in respect of certain planned investments, additional investments or disposals by EDF. This agreement also introduced a procedure for monitoring the results of external growth operations.

The Public service contract between the French State and EDF was signed on October 24, 2005. This contract is intended to form the framework for public service missions entrusted by the lawmaker to EDF for an unlimited period, since the law of August 9, 2004 simply requires presentation of a report every three years to the French parliament without stipulating the duration of the contract. The first three-year report was remitted to the French State in 2008.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the Minister in charge of energy, which sets objectives for the allocation of generation capacity.

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorization to build and operate generation facilities, and establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and the level of the Contribution to the Public Electricity Service (*Contribution aux charges de Service Public de l'Électricité* or CSPE).

## 20.2.2 Relations with public sector entities

EDF enters into normal business transactions with public sector entities, mainly for electricity supplies.
Reprocessing and transportation of nuclear fuel by AREVA for EDF account for most of the external expenses concerning state-owned entities. Other purchases concern nuclear plant maintenance services provided by the AREVA Group.

EDF also owns shares in AREVA valued at € 123 million at December 31, 2009, classified as investments.

# Note 21 Inventories and work-in-progress

| *(in millions of Euros)* | Nuclear fuel and materials | Other fuels | Other raw materials | Work-in-progress for production of goods and services | Total |
|---|---|---|---|---|---|
| Gross value at 12.31.2008 | 6,371 | 446 | 613 | 25 | 7,455 |
| Provisions at 12.31.2008 | (13) | - | (145) | - | (158) |
| **Net value at 12.31.2008** | **6,358** | **446** | **468** | **25** | **7,297** |
| Gross value at 12.31.2009 | 6,701 | 457 | 737 | 16 | 7,911 |
| Provisions at 12.31.2009 | (12) | - | (160) | - | (172) |
| **NET VALUE AT 12.31.2009** | **6,689** | **457** | **577** | **16** | **7,739** |

# Note 22 Receivables and prepaid expenses

| *(in millions of Euros)* | Liquidity: Within 1 year | Liquidity: Between 2 and 5 years | Liquidity: After 5 years | Gross value at 12.31.2009 | Gross value at 12.31.2008 |
|---|---|---|---|---|---|
| Advances to subsidiaries and affiliates | 19 | - | - | **19** | 2,236 |
| Loans | 50 | 24 | 10 | **84** | 131 |
| Other investments | 6,277 | 2,171 | 681 | **9,129** | 7,309 |
| **Fixed asset receivables** | **6,346** | **2,195** | **691** | **9,232** | **9,676** |
| Operating receivables | | | | | |
| Trade receivables | | | | | |
| Amounts billed | 2,139 | 53 | - | **2,192** | 2,183 |
| Unbilled receivables (1) | 9,074 | - | - | **9,074** | 9,239 |
| Other operating receivables (2) | 5,422 | 508 | 163 | **6,093** | 5,929 |
| **Current asset receivables** | **16,635** | **561** | **163** | **17,359** | **17,351** |
| Cash instruments (3) | 229 | 573 | 383 | **1,185** | 399 |
| Prepaid expenses | 499 | 55 | 11 | **565** | 812 |
| Advances and progress payments on orders | 450 | 23 | - | **473** | 629 |
| **TOTAL** | **24,159** | **3,407** | **1,248** | **28,814** | **28,867** |

*(1) Mainly receivables for energy delivered and measured but unbilled, and energy not yet delivered or billed.*

*(2) Including € 2,249 million of receivables on the French State for taxes, € 1,844 million for the Contribution to the Public Electricity Service (CSPE), € 1,030 million of receivables on Group companies, principally EDF Trading at December 31, 2009.*

*(3) Unrealized gains on foreign exchange instruments.*

# Note 23 Marketable securities

| *(in millions of Euros)* | 2009 | 2008 | Change |
|---|---|---|---|
| Treasury shares marketable securities (1) | 3 | 168 | (165) |
| Euro investment funds | 2,232 | 5,337 | (3,105) |
| Negotiable debt instruments (Euros or other currencies) maturing within 3 months (2) | 884 | 1,354 | (470) |
| Negotiable debt instruments (Euros or other currencies) maturing after 3 months (2) | 1,935 | 567 | 1,368 |
| Euro bonds | 215 | 366 | (151) |
| Other marketable securities | 2 | 4 | (2) |
| **Gross value** | **5,271** | **7,796** | **(2,525)** |
| **Provisions (3)** | **(10)** | **(129)** | **119** |
| **NET VALUE** | **5,261** | **7,667** | **(2,406)** |

*(1) 2,754,567 shares were attributed to employees in August 2009 under the free share plan, representing an amount of €165 million.*

*(2) In 2009, short-term negotiable debt instruments in Euros include €100 million of dedicated assets, compared to €670 million in 2008.*

*(3) Provisions mainly consist of impairment of €10 million recorded on investment funds in 2009, compared to €93 million in 2008.*

# Note 24 Variation in cash and cash equivalents reported in the cash flow statement

| *(in millions of Euros)* | 2009 | 2008 | Change |
|---|---|---|---|
| Marketable securities | 5,271 | 7,796 | (2,525) |
| Cash and cash equivalents | 2,206 | 586 | 1,620 |
| **Sub-total in balance sheet assets** | **7,477** | **8,382** | **(905)** |
| Euro investment funds | (2,232) | (5,337) | 3,105 |
| Negotiable debt instruments (Euro) maturing after 3 months | (1,732) | (567) | (1,165) |
| Negotiable debt instruments (non Euro) maturing after 3 months | (203) | - | (203) |
| Bonds | (215) | (366) | 151 |
| Marketable securities - treasury shares | (3) | (168) | 165 |
| Accrued interest on marketable securities maturing after 3 months | (1) | (4) | 3 |
| **Marketable securities included in financial assets in the cash flow statement** | **(4,386)** | **(6,442)** | **2,056** |
| Purchases of exchange options classified as cash instruments in the balance sheet | - | 5 | (5) |
| Cash advances to subsidiaries (cash pooling agreements) included in "Other operating receivables" in the balance sheet | - | 34 | (34) |
| Cash advances from subsidiaries (cash pooling agreements) included in "Other operating liabilities" in the balance sheet | (2,196) | (1,619) | (577) |
| **Cash and cash equivalents, closing balance in the cash flow statement** | **895** | **360** | **535** |
| Elimination of the effect of currency fluctuations | - | - | (7) |
| Elimination of net financial income on cash and cash equivalents | - | - | (33) |
| **NET VARIATION IN CASH AND CASH EQUIVALENTS IN THE CASH FLOW STATEMENT** | | | **495** |

# Note 25 Unrealized foreign exchange gains and losses

Net unrealized foreign exchange gains and losses total € 119 million (net gain). Unrealized exchange losses include € 128 million related to a borrowing in Pounds Sterling after hedging using swaps.

# Note 26 Changes in equity

| (in millions of Euros) | Capital and capital contributions | Reserves and premiums | Retained earnings | Net income | Investment subsidies received | Tax-regulated provisions | Total equity |
|---|---|---|---|---|---|---|---|
| **At December 31, 2007** | **911** | **6,874** | **3,175** | **4,934** | **47** | **7,197** | **23,138** |
| Allocation of 2007 net income | - | - | 3,659 | (3,659) | - | - | - |
| Dividend distribution | - | - | 2 | (1,275) | - | - | (1,273) |
| 2007 net income | - | - | - | 867 | - | - | 867 |
| Interim dividend | - | - | (1,164) | - | - | - | (1,164) |
| Other changes | - | (1) | 75 | - | 8 | (90) | (8) |
| **At December 31, 2008** | **911** | **6,873** | **5,747** | **867** | **55** | **7,107** | **21,560** |
| Dividend distribution | - | - | (297) | (867) | - | - | (1,164) |
| 2008 net income | - | - | - | 4,580 | - | - | 4,580 |
| Interim dividend | 13 | 925 | (1,002) | - | - | - | (64) |
| Other changes | - | (2) | - | - | 31 | (180) | (151) |
| **AT DECEMBER 31, 2009** | **924** | **7,796** | **4,448** | **4,580** | **86** | **6,927** | **24,761** |

On November 5, 2009 the Board of Directors decided to pay an interim dividend in respect of 2009, payable in form of cash or new shares. Settlement of the dividends payable in form of shares led to issuance of 26,695,572 new shares with nominal value of €0.50 each, giving a total of €13 million, plus an issue premium of €925 million. Issuance expenses were charged to this premium.

The €3,201 million variation in equity in 2009 is attributable to the following:

- €(1,164) million for the balance of dividend distributions from 2008 net income as decided at the General Shareholders' Meeting of May 20, 2009 (€0.64 per share, paid on June 3, 2009);
- €(64) million for the interim dividend of €0.55 per share paid in cash from 2009 net income on December 17, 2009;
- €4,580 million of net income for 2009;
- €(151) million in other changes, mainly corresponding to net reversals of €(180) million from tax-regulated provisions and €31 million of subsidies received.

The €1,578 million decline in equity in 2008 was mainly attributable to the following:

- €(1,273) million for the balance of dividend distributions from 2007 net income as decided at the General Shareholders' Meeting of May 20, 2008 (€0.70 per share, paid on June 2, 2008);
- €(1,166) million for 2008 interim dividend distributions as decided at the Board of Directors' meeting of November 20, 2008 (€0.64 per share, paid on December 17, 2008, totalling €1,164 million excluding treasury shares);
- €867 million of net income for 2008;
- €(8) million in other changes, mainly corresponding to net reversals of €(90) million from tax-regulated provisions and the €75 million effect of the change in accounting method for the expense related to the free share plan, under CNC opinion 2008-17.

## Share capital

At December 31, 2009, the share capital amounts to €924,433,331, comprising 1,848,866,662 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.5% by the French State, 13.1% by the public (institutional and private investors), and 2.4% by current and retired Group employees, with 244,412 held by EDF as treasury shares.

# Note 27 Special concession accounts

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| Value in kind of assets (1) | 102 | 182 |
| Revaluation difference | 1,103 | 1,134 |
| Additional depreciation (1) | 15 | - |
| **Rights in hydropower concession assets** | **1,220** | **1,316** |
| Value in kind of assets | 1,205 | 1,137 |
| Unamortized financing by the operator | (686) | (633) |
| Amortization of grantor financing | 214 | 202 |
| Contributions received for concessionary plant assets under construction | 14 | 16 |
| **Rights in public distribution concession assets (2)** | **747** | **722** |
| **TOTAL** | **1,967** | **2,038** |

*(1) Amendment of the accounting treatment at January 1, 2009 in application of the law of December 30, 2006 on water and aquatic environments: the depreciation period has been changed to reflect the termination date of hydropower concessions (with recognition of additional depreciation) and the value of grantors' rights has been adjusted.*

*(2) Rights in public distribution concession assets concern Island Energy Systems (IES).*

# Note 28 Provisions for risks and contingent liabilities

| | 2008 | Increases | | Decreases | | | 2009 |
|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | | Operating | Financial | Utilizations | Reversals | Financial | |
| Provisions for | | | | | | | |
| Unrealized exchange losses (1) | 505 | - | 66 | - | - | (505) | 66 |
| Risks related to investments | 2 | - | - | - | - | - | 2 |
| Losses on contracts | 47 | 36 | 2 | (41) | (2) | - | 42 |
| Other risks | 224 | 40 | 2 | (33) | (49) | - | 184 |
| **PROVISIONS FOR RISKS** | **778** | **76** | **70** | **(74)** | **(51)** | **(505)** | **294** |

*(1) The financial reversal mainly relates to capitalization of a £2,123 million advance to Lake Acquisitions in 2008 to finance the purchase of British Energy shares.*

## Contingent liabilities

**INDIVIDUAL TRAINING ENTITLEMENT**
***(DROIT INDIVIDUEL À LA FORMATION* OR *DIF)***

The French law of May 4, 2004 allows each employee an individual entitlement to a minimum of 20 hours of training per year, which may be accumulated over 6 years. The company agreement with unions signed on February 24, 2006 defines the conditions for exercising this entitlement, listing the types of training eligible. Expenses for such training are recorded as incurred.

DIF entitlements earned but not yet used at December 31, 2009 total 7,054,647 hours, including 7,028,749 for which no application has been made.

# Note 29 Provisions for back-end nuclear cycle and decommissioning



Provisions for back-end nuclear cycle expenses and decommissioning are calculated under the principles presented in note 1.14, and comply with the instructions of the law of June 28, 2006 and its implementing provisions. In compliance with the regulation on secure financing of nuclear expenses:

- EDF books provisions to cover all obligations related to the nuclear facilities it operates;
- EDF is building up a portfolio of dedicated assets to cover long-term obligations.

The corresponding expenses are estimated based on the economic conditions at year-end, and spread over a forecast disbursement schedule. A provision is booked equal to the discounted value at year end (using a 2% inflation rate and a 5% discount rate).

## 29.1 Provisions for the back-end nuclear cycle

Changes in provisions for the back-end nuclear cycle break down as follows:

| *(in millions of Euros)* | 2008 | Increases | | Decreases | | Other [2] | 2009 |
|---|---|---|---|---|---|---|---|
| | | Operating | Financial [1] | Utilizations | Reversals | | |
| Provision for spent fuel management | 8,553 | 368 | 469 | (714) | (11) | 21 | 8,686 |
| Provision for long-term radioactive waste management | 6,158 | 17 | 305 | (120) | (21) | 5 | 6,344 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **14,711** | **385** | **774** | **(834)** | **(32)** | **26** | **15,030** |

*(1) Financial discounting expenses.*

*(2) This corresponds to the portion of fuel in the reactor but not yet irradiated, with an associated entry in inventories.*

Expenses are estimated based on the economic conditions at the year-end, discounted to present value as follows:

| *(in millions of Euros)* | 2009 Costs based on economic conditions at year-end | 2009 Amounts in provisions at present value | 2008 Costs based on economic conditions at year-end | 2008 Amounts in provisions at present value |
|---|---|---|---|---|
| Provision for spent fuel management | 13,969 | 8,686 | 13,675 | 8,553 |
| Provision for long-term radioactive waste management | 22,321 | 6,344 | 21,464 | 6,158 |
| **PROVISIONS FOR BACK-END NUCLEAR CYCLE** | **36,290** | **15,030** | **35,139** | **14,711** |

## 29.1.1 Provisions for spent fuel management

This covers services in connection with the following:
- removal of spent fuel from EDF's generation centers, reception, interim storage and processing, including conditioning and storage of the resulting waste;
- processing expenses exclusively concern spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated.

Measurement of these expenses follows the principles set forth in the EDF-AREVA framework agreement governing spent fuel management contracts (processing and recycling) for the post-2007 period. This agreement was signed on December 19, 2008 in continuation of past contractual clauses. Negotiations between EDF and AREVA continued until February 5, 2010, when agreement was reached on the principles for application of the framework agreement. These principles should be implemented in the operating contract for 2008-2012 shortly.

For oxidation and storage of uranium obtained from processed fuel that is not immediately recycled, measurement of expenses is based on EDF's best estimates, taking into account the ongoing negotiations with AREVA and short-term recycling forecasts for these materials.

They are calculated based on forecast physical volumes at the year-end.

For fuel in reactors but not yet irradiated, provisions are booked against an increase in the value of the fuels included in inventories.

EDF's contribution towards decommissioning costs for La Hague reprocessing plant, and its share of the cost of recovering and conditioning old waste, are defined in an agreement signed with AREVA on July 6, 2009 setting the exact amounts and timing of payments and releasing EDF from any further obligation. The last installment is due to be paid by July 1, 2011. The first two installments have been paid and the outstanding payments are recorded in operating liabilities.

## 29.1.2 Provisions for long-term radioactive waste management

This includes future expenses for:
- removal and storage of radioactive waste resulting from decommissioning of regulated nuclear installations operated by EDF;
- removal and storage of radioactive waste resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled on an industrial scale in existing installations: plutonium or uranium fuel derived from enriched processing, fuel from Creys Malville and Brennilis;
- EDF's share of the costs of studies, coverage, shutdown and surveillance of storage centers:
  - existing centers, for very low-level waste, and low and medium-level waste,
  - new centers to be opened, for long-life low-level waste and long-life medium and high-level waste.

The volumes of waste concerned by provisions include packages of existing waste and all waste to be conditioned, resulting from decommissioning or spent fuel processing at La Hague (based on all fuel in reactors at December 31, spent or otherwise).

These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by the French agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*).

For waste resulting from decommissioning of plants in operation, the accounting treatment is identical to the treatment of decommissioning expenses, with recognition of an asset corresponding to the provision.

For future waste that will result from fuel currently in reactors but not yet irradiated, provisions are booked against an increase in the cost of the fuel included in inventories.

The provision for long-life medium and high-level waste is the largest component of the provisions for long-term radioactive waste management. The French law of June 28, 2006 on the sustainable management of radioactive materials and waste has confirmed EDF's assumption of geological storage. Provisions are based on that assumption.
Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by the task force set up by the French department for Energy and Raw Materials (*Direction Générale de l'Énergie et des Matières Premières* – DGEMP, which has since become the French department for Energy and Climate – *Direction Générale de l'Énergie et du Climat* or DGEC) comprising members representing the relevant Government departments (DGEMP, the French State investment agency APE and the Budget Department), ANDRA and the producers of waste (EDF, AREVA, CEA). The approach applied by EDF to the working party's conclusions is reasonable and coherent with information available internationally.

Regarding the provision for long-life low-level waste, ANDRA began to seek a storage site in 2008. Although the two sites selected for geological investigation have withdrawn, the DGEC and ANDRA do not at this stage consider that adjustment is required to the schedule for development of the storage site for long-life low-level waste due to open in 2019.

# 29.2 Provisions for decommissioning and last cores

The change in decommissioning and last core provisions breaks down as follows:

| (in millions of Euros) | 2008 | Increases | | Decreases | | 2009 |
|---|---|---|---|---|---|---|
| | | Operating | Financial [1] | Utilizations | Reversals | |
| Decommissioning provisions for fossil-fired plants | 434 | 8 | 22 | (45) | 6 | 425 |
| Decommissioning provisions for nuclear plants | 10,360 | 6 | 518 | (176) | - | 10,708 |
| Provisions for last cores | 1,675 | 65 | 85 | - | - | 1,825 |
| **TOTAL** | **12,469** | **79** | **625** | **(221)** | **6** | **12,958** |

*(1) Financial discounting expenses.*

Expenses are estimated based on the economic conditions at the year-end, discounted to present value as follows:

| (in millions of Euros) | 2009 | | 2008 | |
|---|---|---|---|---|
| | **Costs based on economic conditions at year-end** | **Amounts in provisions at present value** | Costs based on economic conditions at year-end | Amounts in provisions at present value |
| Decommissioning provisions for fossil-fired plants | 594 | 425 | 609 | 434 |
| Decommissioning provisions for nuclear plants | 20,696 | 10,708 | 20,452 | 10,360 |
| Provisions for last cores | 3,732 | 1,825 | 3,566 | 1,675 |
| **TOTAL PROVISIONS FOR DECOMMISSIONING AND LAST CORES** | **25,022** | **12,958** | **24,627** | **12,469** |

## 29.2.1 Decommissioning provisions for fossil-fired power plants

The expenses related to decommissioning of fossil-fired power plants are determined according to regularly updated studies based on estimated future costs, measured by reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

For plants still in operation, an asset is recorded against the provision.

The provision recorded at December 31, 2009 reflects the most recent known contractor quotes and commissioning of new generation assets.

## 29.2.2 Decommissioning provisions for nuclear power plants

These provisions concern the decommissioning of pressurized water reactor (PWR) nuclear power plants currently in operation and nuclear power plants that have been permanently shut down.

The underlying assumption is that once decommissioning is complete, the sites will be returned to their original state and the land reused.

For plants still in operation:

- an asset corresponding to the provision is recognized;
- an asset is also recorded in the form of accrued revenues, in order to recognize the share of decommissioning costs to be borne by foreign partners, in proportion to their investment in the PWR plants concerned.

### FOR NUCLEAR POWER PLANTS CURRENTLY IN OPERATION (PWR PLANTS WITH 900 MW, 1300 MW AND N4 REACTORS)

Provisions are estimated based on a 1991 study by the French Ministry of Trade and Industry, which set an estimated benchmark cost in €/MW, confirming the assumptions defined in 1979 by the PEON commission. This estimate was confirmed by further studies carried out in 1999 focusing on a specific site, and a further valuation in 2009.

In compliance with commitments, in 2009 EDF revalued decommissioning costs for PWR plants in operation through a procedure comprising the following stages:

- measurement of the decommissioning cost for a PWR plant with four 900 MW units, taking into consideration the most recent developments in regulations, past experience in decommissioning of shut-down plants and recommendations issued by the French Nuclear Safety Authority;
- a review of the scheduling for decommissioning operations over time;
- determination of the rules for extrapolation of costs for the entire fleet of PWR plants in operation.

International intercomparison supported the results of this study.

This revaluation resulted in a figure for decommissioning costs that confirms the amount of the provision booked to date, and validates the benchmark costs used, expressed as €/MW.

The figure includes measurement of the provisions for the three regulated nuclear installations (*Installations nucléaires de base*) attached to the PWR fleet currently in operation, in keeping with commitments made.

#### FOR PERMANENTLY SHUT-DOWN NUCLEAR POWER PLANTS (UNGG POWER PLANTS, CREYS-MALVILLE, BRENNILIS AND CHOOZ A)

The provision is based on contractor quotes (costs and schedules) updated in 2008, which take into account changes in technical and financial assumptions, experience of decommissioning operations currently in process and an intercomparison study.

Forecast disbursements, based on internally-prepared schedules, are adjusted to reflect inflation, then discounted.

Under the agreement signed by EDF and the CEA in December 2008 for decommissioning of the Brennilis and Phénix plants and the treatment of spent fuel from the same plants, EDF has sole responsibility for decommissioning of Brennilis, and is freed from all further obligations for decommissioning of Phénix. Each party remains responsible for long-term waste management in proportion to its initial investment. The full and final payments were made on March 10, 2009.

### 29.2.3 Provision for last cores

For EDF, this provision covers expenses related to the future loss on unused fuel following the final reactor shutdown. It comprises two types of expenses:

- write-down of the inventory of fuel in the reactor that will not be totally burnt up when the reactor is shut down, valued at the last known average price;
- the cost of fuel reprocessing and the corresponding waste disposal and storage costs for fuel not yet burnt at the time the plant shuts down. These costs are valued in a similar way to provisions for spent fuel management and long-term radioactive waste management.

Since this provision relates to an obligation that existed at the commissioning date of the nuclear unit containing the core, all costs are fully covered by a provision and an asset associated with the provision is recognized.

## 29.3 Secure financing of long-term obligations

### 29.3.1 Discount rate

EDF applies a discount rate of 5% in calculating its provisions, together with assumed inflation of 2%, resulting in an effective rate close to 3%.

#### CALCULATION OF THE DISCOUNT RATE

The discount rate is determined based on long series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The assumption of the nominal rate is currently appropriate for the duration of nuclear commitments, especially in view of the French 2055 treasury bond. The average return on 50-year French treasury bonds is not currently available over a sufficient duration. The benchmark used to determine the discount rate is the sliding average over 10 years of the return on French treasury bonds over longer time horizons, plus the spread of corporate bonds rated A to AA, which include EDF.

The assumed inflation rate used is coherent with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked bonds.

#### REVISION OF THE DISCOUNT RATE

The methodology used to determine the discount rate gives priority to long-term trends in rates, in keeping with the long-term horizon for disbursements. The discount rate is revised on the basis of structural developments in the economy leading to medium- and long-term changes.

The discount rate applied complies with the two limits set by the decree of February 23, 2007 and the decision of March 21, 2007. It must remain below:

- a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months of the constant 30-year rate (*TEC 30 ans*), observed on the last date of the period concerned, plus one point";
- and the expected rate of return on assets covering the liability.

## 29.3.2 Sensitivity factors in provisions for the back-end nuclear cycle and provisions for decommissioning and last cores

This sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under economic conditions for December of the year concerned with the discounted value of the amount.

This approach can be complemented by estimating the impact of a change in the discount rate on the discounted value.

In application of article 11 of the decree of February 23, 2007, the following table reports these details for the main components of provisions for the back-end nuclear cycle, decommissioning of nuclear plants and last cores.

| | Amounts in provisions at present value | | Sensitivity to discount rate | | | |
|---|---|---|---|---|---|---|
| | 2009 | 2008 | 2009 | | 2008 | |
| *(in millions of Euros)* | | | 0.25% | -0.25% | 0.25% | -0.25% |
| **Back-end of nuclear cycle** | | | | | | |
| Spent fuel management | **8,686** | 8,553 | **(192)** | **205** | (189) | 201 |
| Long-term radioactive waste management | **6,344** | 6,158 | **(391)** | **445** | (378) | 430 |
| **Decommissioning and last cores** | | | | | | |
| Decommissioning of power plants | **10,708** | 10,360 | **(542)** | **575** | (539) | 574 |
| Last cores | **1,825** | 1,675 | **(81)** | **87** | (79) | 85 |
| **TOTAL** | **27,563** | **26,746** | **(1,206)** | **1,312** | **(1,185)** | **1,290** |

## 29.3.3 Dedicated assets

The law of June 28, 2006 on sustainable management of radioactive materials and waste and the decree of February 23, 2007 require nuclear power operators to apply a plan for constitution of dedicated assets. These regulations require the value of the dedicated asset portfolio to be at least equal to the value of provisions within 5 years, *i.e.* by June 2011. Details of dedicated assets are given in note 19.

# Note 30 Provisions for employee benefits



Changes in provisions for employee benefits were as follows:

| | 12.31.2008 | Increases | | Decreases | | 12.31.2009 |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | | Operating (1) | Financial | Utilizations (2) | Others | |
| Post-employment benefits | 8,943 | 296 | 820 | 1,005 | 2 | **9,052** |
| Long-term benefits | 575 | 102 | 33 | 67 | - | **643** |
| **PROVISION FOR EMPLOYEE BENEFITS** | **9,518** | **398** | **853** | **1,072** | **2** | **9,695** |

*(1) Including past service cost of €271 million and actuarial losses of €119 million.*

*(2) Including €749 million for benefits paid out and €317 million for the expected return on fund assets.*

# 30.1 Provisions for post-employment benefits

In application of the CNC Emergency Committee opinion 2000-A issued on July 6, 2000 and article 355.1 paragraph 2 of the French General Chart of Accounts, EDF opted for recognition of post-employment benefits granted to personnel as of January 1, 2005.

Details of these provisions are shown below:

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases | Others | 12.31.2009 |
|---|---|---|---|---|---|
| Pensions | 7,583 | 939 | (891) | - | 7,631 |
| Benefits in kind (electricity/gas) | 642 | 63 | (39) | - | 666 |
| Retirement gratuities | - | 64 | (51) | (2) | 11 |
| Bereavement benefit | 173 | 10 | (7) | - | 176 |
| Bonus paid leave | 123 | 12 | (2) | - | 133 |
| Cost of studies indemnity | 18 | 1 | (1) | - | 18 |
| CNIEG administration expenses | 380 | 24 | (14) | - | 390 |
| Retirement indemnities and pensions for seconded personnel | 24 | 3 | - | - | 27 |
| **TOTAL** | **8,943** | **1,116** | **(1,005)** | **(2)** | **9,052** |

## 30.1.1 Pensions

The main measures of the financing reform for the special IEG pension system took effect on January 1, 2005.
Specific benefits earned under the special IEG system are benefits not covered by the standard pension systems. Specific past benefits are specific benefits earned for periods validated at December 31, 2004, and specific future benefits are those earned for periods validated after December 31, 2004.
Specific past benefits for the gas and electricity transmission and distribution activities and public service mission management businesses *i.e.* the regulated or non-competitive activities, are financed by the CTA levy (*Contribution Tarifaire d'Acheminement*).

The direct financing by EDF covers:
- specific past benefits of employees in the "deregulated" or "competitive" activities;
- specific future benefits of employees in the regulated and deregulated activities;
- specific benefits of employees benefiting from early retirement before the standard legal retirement age.

## 30.1.2 Other post-employment benefits

In addition to pensions, other benefits are granted to employees not currently in active service, as detailed below:

### BENEFITS IN KIND (ELECTRICITY/GAS)

Article 28 of the IEG's national statutes entitles all employees (active or inactive) to benefits in kind in the form of supplies of electricity or gas at the preferential "Employee price". EDF's obligation for supplies of energy to EDF employees corresponds to the probable present value of kWhs supplied to beneficiaries during their retirement, valued on the basis of the unit cost, taking into account the payment received under the energy exchange agreement with GDF SUEZ.

### RETIREMENT GRATUITIES

Retirement gratuities are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependants if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy.

### BEREAVEMENT BENEFIT

The bereavement benefit is paid out upon the death of an inactive or handicapped employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26 § 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to two months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred).

### BONUS PRE-RETIREMENT PAID LEAVE

All employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment.

### COST OF STUDIES INDEMNITY

The cost of studies indemnity is a family benefit not defined by the statutes, intended to provide assistance to inactive employees or their dependents whose children are still in education. It is also paid to beneficiaries of the orphan's pension.

### CNIEG ADMINISTRATIVE EXPENSES

The CNIEG's administrative and financial expenses are paid in varying proportions by all IEG companies.

### PENSION EQUALIZATION FOR EMPLOYEES ON SECONDMENT

The pension equalization system for employees on secondment is designed to guarantee employees seconded to EDF group companies in or outside France between January 1, 2000 and December 31, 2005 income equivalent to the difference between the amount they would have received under the IEG pension system and the amount they receive or will receive under the mandatory systems to which they were affiliated during their secondment.

### ADDITIONAL RETIREMENT BONUS

This additional bonus is paid to senior executives when they take retirement and benefit from a statutory old age pension.

## 30.2 Provisions for other long-term benefits for active employees

Benefits awarded to employees in activity are as follows:

| *(in millions of Euros)* | 12.31.2008 | Increases | Decreases | 12.31.2009 |
|---|---|---|---|---|
| Discretionary benefit for asbestos-related illness | 10 | 3 | (1) | 12 |
| Asbestos-related early retirement | 9 | 5 | (3) | 11 |
| Long-service awards | 73 | 8 | (8) | 73 |
| Disability annuities | 97 | 61 | (30) | 128 |
| Annuities following industrial accident or work-related illness | 386 | 58 | (25) | 419 |
| **TOTAL** | **575** | **135** | **(67)** | **643** |

### DISCRETIONARY BENEFIT FOR ASBESTOS-RELATED ILLNESS

To improve the compensation received by employees with a recognized asbestos-related illness contracted in the course of their employment, EDF pays a discretionary indemnity to the employee or to his dependants if he has died as a result of the illness. The indemnity is equivalent to 20% of the annuity received by beneficiaries or their dependants. For beneficiaries receiving an indemnity under the special IEG system, this indemnity represents 20% of that indemnity, payable in a lump sum.

### ASBESTOS-RELATED EARLY RETIREMENT

EDF has set up an early retirement system with no minimum service period requirement for workers aged at least 50 who are officially recognized as affected by an asbestos-related illness contracted in the course of their employment.

### LONG-SERVICE AWARDS

The financial benefits payable to employees awarded long-service medals vary depending on seniority. The projected unit cost method is used to measure these obligations, which correspond to the probable present value of these benefits when an employee reaches the relevant levels of seniority.

### DISABILITY ANNUITIES

After five years of temporary disability, an employee who cannot resume work for health reasons is declared disabled.

Employees currently in service are entitled to receive an annuity when they are declared disabled by the National Disability Commission (*Commission Nationale d'Invalidité*) (Article 4 of appendix 3 of the National Statutes). In such a case, they receive a disability pension corresponding to 50% of their most recent salary. An employee may be declared disabled after being on long-term sick leave for 5 years, or after industrial accident or work-related illness if the employee is declared unemployable. This benefit, paid until retirement age if the employee's health does not improve, cannot be transferred.

### ANNUITIES FOLLOWING INDUSTRIAL ACCIDENT OR WORK-RELATED ILLNESS

Like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or work-related illness, as stipulated in Book IV of the French Social Security Code. These benefits cover all employees and the dependants of any employee who dies as a result of an industrial accident, an accident on the journey between home and work or work-related illness.

The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions.

# 30.3 Actuarial assumptions

The main actuarial assumptions used for provisions for post-employment benefits and long-term employee benefits under the IEG system are summarized below:

- the discount rate is 5.25% at December 31, 2009 (compared to the 2008 rate of 5.75%). Actuarial gains and losses after changes in discount rate generated a loss of €181 million at December 31, 2009 (compared to a gain of €773 million at December 31, 2008);
- the inflation rate is 2%;
- the rise in the basic national salary is estimated at 2% excluding inflation;
- pay rise levels independently of the basic national salary were determined by means of observations for the period 1996 to 2003;
- the average residual period of employment is 12.5 years;
- the staff turnover rate is not significant.

# 30.4 Changes in the discounted value of the obligation and fund assets

## 30.4.1 Change in the value of the obligation and net position

| | Obligations under plans | |
|---|---|---|
| *(in millions of Euros)* | unfunded | funded |
| **Present value of the obligation at 01.01.2009** | **2,791** | **11,787** |
| Current year service cost | 254 | 17 |
| Interest expense | 174 | 679 |
| Actuarial gains and losses | 275 | 912 |
| Benefits paid | (253) | (493) |
| **Present value of the obligation at 12.31.2009** | **3,241** | **12,902** |
| Fair value of fund assets | - | (6,178) |
| **Net position** | **3,241** | **6,724** |
| Actuarial gains and losses | (500) | 319 |
| Past year service cost non-vested | (3) | (86) |
| **NET LIABILITY AT 12.31.2009** | **2,738** | **6,957** |

## 30.4.2 Change in the discounted value of fund assets

| *(in millions of Euros)* | |
|---|---|
| **Fair value of fund assets at 01.01.2009** | **5,738** |
| Expected return on fund assets | 317 |
| Net contributions | 264 |
| Benefits paid | (262) |
| Actuarial gains and losses on fund assets | 121 |
| **FAIR VALUE OF FUND ASSETS AT 12.31.2009** | **6,178** |

## 30.4.3 Breakdown of the value of fund assets

The expected return on fund assets depends on the expected return on each category of financial assets.

Financial assets were allocated as follows at December 31, 2009:

| | Retirements indemnities | Pension plan |
|---|---|---|
| Shares | 47.0% | 35.2% |
| Bonds and monetary assets | 53.0% | 64.8% |

The expected return on long-term financial assets at December 31, 2009 was set at:

- 5.33% for the pension funds;
- 5.02% for retirement gratuities.

# Note 31 Provision for renewal of property, plant and equipment operated under concession

| (in millions of Euros) | 2008 | Increases | | Decreases | | Other | 2009 |
|---|---|---|---|---|---|---|---|
| | | Operating expenses | Exceptional expenses | Utilizations | Reversals | | |
| **PROVISION FOR RENEWAL** | **202** | **19** | | | | **(2)** | **219** |

# Note 32 Provisions for other expenses

| (in millions of Euros) | 2008 | Increases | | Decreases | | 2009 |
|---|---|---|---|---|---|---|
| | | Operating | Financial [a] | Utilizations | Reversals | |
| **Provisions for** | | | | | | |
| Personnel expenses [1] | 593 | 84 | 10 | (182) | (2) | 503 |
| Repairs and maintenance [2] | 161 | 29 | - | (30) | - | 160 |
| Energy delivered, not yet measured or billed | 20 | 4 | - | (6) | (3) | 15 |
| Other expenses [3] | 1,578 | 535 | - | (1,438) | (6) | 669 |
| **PROVISIONS FOR OTHER EXPENSES** | **2,352** | **652** | **10** | **(1,656)** | **(11)** | **1,347** |

*(a) Financial expenses related to discounting.*

*(1) Mainly including € 393 million for the contribution to preserve entitlements (AGIRC, ARRCO).*
*An amount of € 87 million was reversed from the provision booked in connection with the attribution of free shares to employees following delivery of the shares in August 2009.*

*(2) This concerns the ten-yearly major inspection and servicing of nuclear and fossil-fired power plants.*

*(3) At December 31, 2009, this includes € 501 million related to the TaRTAM transition tariff system (€ 1,351 million in 2008), and € 112 million to cover expenses related to social security bodies (€ 126 million in 2008).*

# Note 33 Financial and operating liabilities

| *(in millions of Euros)* | Maturity | | | Gross value at 12.31.2009 | Gross value at 01.01.2009 after reclassification* |
|---|---|---|---|---|---|
| | Within 1 year | 2 - 5 years | After 5 years | | |
| Bonds | 1,027 | 10,322 | 18,457 | 29,806 | 15,292 |
| Borrowings from credit institutions | 300 | - | - | 300 | - |
| Other borrowings | 2,791 | 3 | 2 | 2,796 | 5,260 |
| Other financial liabilities: | | | | | |
| Advances on consumption | 51 | 88 | 10 | 149 | 158 |
| Other | 950 | 21 | 353 | 1,324 | 914 |
| **Financial liabilities** | **5,119** | **10,434** | **18,822** | **34,375** | **21,624** |
| **Advances and payments received from customers** | **4,279** | **2** | **-** | **4,281** | **3,765** |
| Trade receivables and related accounts | | | | | |
| Invoices received | 2,729 | - | - | 2,729 | 2,588 |
| Invoices to be received (1) | 6,174 | 742 | - | 6,916 | 7,638 |
| Tax and social security | 5,041 | - | - | 5,041 | 4,999 |
| Debts related to fixed assets and related accounts | | | | | |
| Invoices received | 646 | - | - | 646 | 631 |
| Invoices to be received | 852 | - | - | 852 | 817 |
| Other liabilities | | | | | |
| Credit balances on customer accounts | 50 | - | - | 50 | 46 |
| Other credit balances (2) | 8,068 | 103 | - | 8,171 | 7,010 |
| **Operating, investment and other liabilities** | **23,560** | **845** | **-** | **24,405** | **23,729** |
| **Cash instruments (3)** | **96** | **479** | **739** | **1,314** | **438** |
| **Deferred income (4)** | **576** | **824** | **2,000** | **3,400** | **3,796** |
| **TOTAL** | **33,630** | **12,584** | **21,561** | **67,775** | **53,352** |

** The Euro Medium Term Notes included in other borrowings in 2008 have been reclassified as bonds since January 1, 2009.*

*(1) Including € 1,478 million at December 31, 2009 for invoicing of the full payment to be made for dismantling the La Hague plant under the EDF-AREVA framework agreement.*

*(2) Cash pooling and cash management agreements with subsidiaries amount to € 5,652 million in 2009, compared to € 5,155 million in 2008. The balance of the current account with the subsidiary ERDF is € 2,000 million in 2009, compared to € 2,400 million in 2008.*

*(3) Unrealized losses on foreign exchange instruments.*

*(4) Mainly payments made by partners for electricity to be supplied in future years.*

# Note 34 Financial liabilities



| *(in millions of Euros)* | Balance at 12.31.2008 | Reclassifications (1) | Balance at 01.01.2009 | New borrowings | Repayments | Translation adjustments | Other | Balance at 12.31.2009 |
|---|---|---|---|---|---|---|---|---|
| Bonds in Euros | 2,552 | - | 2,552 | 181 | (1,996) | - | - | 737 |
| Bonds in other currencies | 1,127 | - | 1,127 | 5,104 | (1) | (379) | - | 5,851 |
| Euro-Medium Term notes (EMTN) in Euros | - | 9,370 | 9,370 | 9,769 | - | - | - | 19,139 |
| Euro-Medium Term notes (EMTN) in other currencies | - | 2,243 | 2,243 | 1,795 | - | 42 | - | 4,080 |
| **Bonds** | **3,679** | **11,613** | **15,292** | **16,849** | **(1,997)** | **(337)** | **-** | **29,807** |
| Short-term syndicated loans in Euros | - | - | - | 367 | (367) | - | - | - |
| Short-term syndicated loans in other currencies | - | - | - | 7,818 | (8,017) | 199 | - | - |
| Short-term loans in Euros | - | - | - | 300 | - | - | - | 300 |
| **Borrowings from credit institutions** | **-** | **-** | **-** | **8,485** | **(8,384)** | **199** | **-** | **300** |
| French commercial paper in Euros (BTR) (2) | 3,971 | - | 3,971 | - | (1,848) | - | - | 2,123 |
| Commercial paper in foreign currencies (2) | 1,281 | - | 1,281 | - | (615) | - | - | 666 |
| Euro-Medium Term Notes (EMTN) in Euros | 9,370 | (9,370) | - | - | - | - | - | - |
| Euro-Medium Term Notes (EMTN) in other currencies | 2,243 | (2,243) | - | - | - | - | - | - |
| Contractual financial borrowings (2) | 8 | - | 8 | 1 | (3) | - | - | 6 |
| **Other borrowings and securitisation of receivables** | **16,873** | **(11,613)** | **5,260** | **1** | **(2,466)** | **-** | **-** | **2,795** |
| **Total borrowings 1+2+3** | **20,552** | **-** | **20,552** | **25,335** | **(12,847)** | **(138)** | **-** | **32,902** |
| **Advances on consumption** | **158** | **-** | **158** | **-** | **-** | **-** | **(9)** | **149** |
| Miscellaneous advances | 452 | - | 452 | - | - | - | (4) | 448 |
| Bank overdrafts | 41 | - | 41 | - | - | - | (25) | 16 |
| Deferred bank debits | 39 | - | 39 | - | - | - | 13 | 52 |
| Interest payable | 382 | - | 382 | - | - | - | 426 | 808 |
| **Total other financial liabilities** | **914** | **-** | **914** | **-** | **-** | **-** | **410** | **1,324** |
| **TOTAL FINANCIAL LIABILITIES** | **21,624** | | **21,624** | **25,335** | **(12,847)** | **(138)** | **401** | **34,375** |

*(1) The Euro Medium Term Notes included in other borrowings in 2008 have been reclassified as bonds since January 2009.*

*(2) Repayments are reported net of issues for the period.*

In 2009, EDF undertook several bond issues totaling € 13,580 million bought by French and international institutional investors, and one retail bond of € 3,269 million.

Details of bond issues in Euros and other currencies, totaling € 5,285 million, are as follows:
- € 181 million at the fixed rate of 5.125% maturing in 2019;
- $2,000 million (€ 1,540 million) at the fixed rate of 6.5% maturing in 2019;
- $1,250 million (€ 963 million) at the fixed rate of 5.5% maturing in 2014;
- $1,750 million (€ 1,348 million) at the fixed rate of 6.95% maturing in 2039;
- CHF300 million (€ 197 million) at the fixed rate of 2% maturing in 2012;
- CHF300 million (€ 197 million) at the fixed rate of 4% maturing in 2017;
- CHF50 million (€ 33 million) at the fixed rate of 2% maturing in 2012;
- JPY 44,100 million (€ 330 million) at the fixed rate of 2% maturing in 2016;
- JPY 16,300 million (€ 122 million) at the fixed rate of 1.24% maturing in 2012;
- JPY 45,000 million (€ 337 million) at the fixed rate of 1.63% maturing in 2014;
- JPY 5,000 million (€ 37 million) at the variable rate of 3-month JPY LIBOR +0.8%, maturing in 2014.

Details of EMTN issues, totalling € 11,564 million, are as follows:
- € 2,000 million at the fixed rate of 5.125% maturing in 2015;
- € 2,000 million at the fixed rate of 6.25% maturing in 2021;
- £1,500 million (€ 1,718 million) at the fixed rate of 6.125% maturing in 2034;
- € 3,269 million at the fixed rate of 4.5% maturing in 2014 for private investors;
- € 2,500 million at the fixed rate of 4.625% maturing in 2024;
- JPY 10,000 million (€ 77 million) at the variable rate of 3-month JPY LIBOR +0.75%, maturing in 2015.

These borrowings enabled EDF to repay the syndicated bank loan during 2009. Drawings of £7,344 billion were made on this loan in January 2009.

## 34.1 Breakdown of loans by currency, before and after hedging swaps

| | Structure of liability in balance sheet | | | | Impact of swaps | | Structure of liability after swaps | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *(in millions of Euros)* | Non-Euro | In Euros | % non-Euro | % of debt | Non-Euro | In Euros | Non-Euro | In Euros | % non-Euro | % of debt |
| **I- In Euros** | **-** | **22,305** | **-** | **68** | **-** | **9,112** | **-** | **31,417** | **-** | **94** |
| CHF | 2,400 | 1,618 | 15 | 5 | (2,400) | (1,618) | - | - | - | - |
| GBP | 3,051 | 3,435 | 32 | 10 | (1,248) | (1,405) | 1,803 | 2,030 | 100 | 6 |
| JPY | 182,700 | 1,372 | 13 | 4 | (182,700) | (1,372) | - | - | - | - |
| USD | 6,010 | 4,172 | 39 | 13 | (6,010) | (4,172) | - | - | - | - |
| **II- Non-Euro** | **-** | **10,597** | **100** | **32** | **-** | **(8,567)** | **-** | **2,030** | **100** | **6** |
| **TOTAL I+II** | | **32,902** | | **100** | | **545** | | **33,447** | | **100** |

The nominal value of swaps included in commitments has no effect on loans in the balance sheet. The effect of swaps on loans in Euros was an increase of €9,112 million, and a decrease of €8,567 million for loans in other currencies outside the Euro zone. The volume of long-term loans is therefore increased by €545 million, from €32,902 million to €33,447 million.

# 34.2 Breakdown of loans by type of interest rate before and after hedging swaps

| (in millions of Euros) | Structure of liability in balance sheet | | | Impact of swaps | Structure of liability after swaps | | |
|---|---|---|---|---|---|---|---|
| | Total | % 12.31.2009 | % 12.31.2008 | Total | Total | % 12.31.2009 | % 12.31.2008 |
| **Fixed rates** | | | | | | | |
| Long-Term borrowings and EMTN | 29,279 | - | - | (614) | 28,665 | - | - |
| Short-term borrowings | 2,752 | - | - | (1,603) | 1,149 | - | - |
| **Total borrowings at fixed rate** | **32,031** | **97** | **97** | **(2,217)** | **29,814** | **89** | **70** |
| **Floating rates** | | | | | | | |
| Long-Term borrowings and EMTN | 533 | - | - | 1,184 | 1,717 | - | - |
| Short-term borrowings | 338 | - | - | 1,578 | 1,916 | - | - |
| **Total borrowings at floating rate** | **871** | **3** | **3** | **2,762** | **3,633** | **11** | **30** |
| **TOTAL** | **32,902** | **100** | **100** | **545** | **33,447** | **100** | **100** |

# Note 35 Financial instruments



EDF uses financial instruments to limit the impact of the foreign exchange rate risk on equity and the income statement, and to hedge its interest rate risk.

| *(in millions of Euros)* | | 12.31.2009 To be received (notional) | 12.31.2009 To be given (notional) | 12.31.2008 To be received (notional) | 12.31.2008 To be given (notional) |
|---|---|---|---|---|---|
| **1- Interest rate transactions** | | | | | |
| **Currencies other than the Euro** | | | | | |
| Purchases of FRA GBP contracts | | 113 | 113 | 21 | - |
| Purchases of FRA EUR contracts | | 200 | 200 | - | - |
| **Interest rate swaps - short-term** | | | | | |
| In Euros | | 2,261 | 2,261 | 3,675 | 3,675 |
| In other currencies | GBP | 225 | 225 | 382 | 382 |
| **Interest rate swaps - long-term** | | | | | |
| In Euros | | 2,963 | 2,963 | 2,814 | 2,814 |
| In other currencies | CHF | 404 | 404 | 202 | 202 |
| | GBP | 1,013 | 1,013 | 420 | 420 |
| | JPY | 353 | 353 | - | - |
| **Sub-total** | | **7,532** | **7,532** | **7,514** | **7,493** |
| **2- Exchange rate transactions** | | | | | |
| **Forward transactions** | | | | | |
| | EUR | 7,039 | 19,197 | 4,061 | 4,608 |
| | CAD | - | - | - | 2 |
| | USD | 6,021 | 3,135 | 2,810 | 729 |
| | GBP | 12,704 | 3,648 | 718 | 2,362 |
| | CHF | - | - | 784 | 481 |
| | HUF | 322 | 226 | 217 | 217 |
| | PLN | 433 | 263 | 251 | 256 |
| | JPY | - | 186 | - | - |
| **Currency options** | | | | | |
| Purchases of options | | | | | |
| | EUR | 36 | - | 35 | 74 |
| | HUF | - | 37 | - | - |
| | PLN | - | - | 68 | 31 |
| Sales of options | | | | | |
| | EUR | 36 | - | 37 | 70 |
| | HUF | - | 37 | - | - |
| | PLN | - | - | 68 | 31 |
| **Currency swaps - long-term** | | | | | |
| | EUR | 8,184 | 10,728 | 3,641 | 7,862 |
| | JPY | 1,372 | - | 494 | - |
| | USD | 3,676 | 278 | 499 | 410 |
| | GBP | 3,347 | 7,248 | 4,651 | 2,199 |
| | CHF | 1,618 | - | 875 | - |
| | HUF | 28 | 28 | - | - |
| | PLN | 41 | 41 | 120 | 120 |
| **Sub-total** | | **44,857** | **45,052** | **19,329** | **19,452** |
| **3- Securitization swaps** | | **1,260** | **1,260** | **1,628** | **1,628** |
| **TOTAL FINANCIAL OFF BALANCE SHEET COMMITMENTS** | | **53,649** | **53,844** | **28,471** | **28,573** |

The amounts shown in the above table represent the nominal value of contracts, translated using year-end exchange rates (regardless of whether they are classified as hedges).

# 35.1 Impacts of financial instrument transactions on net income

| *(in millions of Euros)* | 2009 | 2008 |
|---|---|---|
| **Instruments not classified as hedges** | | |
| Realized gains and losses | | |
| Forward currency operations | 366 | 711 |
| Spot currency operations | - | (1) |
| Currency options | (4) | 1 |
| Currency swaps | (3) | 2 |
| Interest rate instruments (swap, cap and floor, FRA, option) | 4 | 9 |
| Unrealized gains and losses | | |
| Forward currency operations | (467) | 281 |
| Currency swaps | 622 | - |
| **Net impact of hedging (hedged instruments and hedging instruments)** | | |
| Interest rate instruments (swap, cap and floor, FRA) | (24) | (16) |

# 35.2 Fair value of derivative financial instruments

The fair value of currency and interest rate swaps was calculated by discounting future cash flows using year-end market exchange and interest rates, over the remaining term of the contracts (market value includes accrued interest).

The book value of off-balance sheet derivatives includes accrued interest, equalization payments and premiums paid or received, and translation adjustments, which are already booked in EDF's accounts. The difference between book value and market value is the unrealized gain or loss.

The fair value of derivative financial instruments reported off-balance sheet at December 31, 2009 as calculated by EDF is as follows:

| *(in millions of Euros)* | Book value | Fair value |
|---|---|---|
| **Interest rate hedges** | | |
| Long-term and short-term swaps, caps and floors | 49 | 71 |
| **Exchange rate hedges** | | |
| Forward exchange transactions | (247) | (333) |
| Long-term and short-term currency swaps | 80 | 5 |
| **TOTAL** | **(118)** | **(257)** |

# Note 36 Off-balance sheet commitments



At December 31, 2009, off-balance sheet commitments related to operations, financing and investments (other than electricity supply commitments and partnership agreements) comprised the following:

| | Maturity | | | 2009 | 2008 |
|---|---|---|---|---|---|
| *(in millions of Euros)* | < 1 year | 1 - 5 years | > 5 years | | |
| **Off-balance sheet commitments given** | **10,767** | **17,937** | **23,639** | **52,343** | **57,525** |
| 1 - Operating commitments | | | | | |
| Commitments related to commercial contracts | 5,329 | 11,143 | 22,883 | **39,355** | 41,191 |
| Commitments related to orders for operating items and fixed assets | 3,317 | 2,802 | 314 | **6,433** | 6,638 |
| Other operating commitments | 774 | 1,493 | 278 | **2,545** | 2,443 |
| 2 - Financing commitments | 2 | 2,499 | 164 | **2,665** | 3,210 |
| 3 - Investment commitments | 1,345 | - | - | **1,345** | 4,043 |
| **Off-balance sheet commitments received** | **3,851** | **9,970** | **369** | **14,190** | **28,805** |
| 1 - Operating commitments [(1)] | 3,848 | 3,458 | 362 | **7,668** | 11,231 |
| 2 - Financing commitments | 3 | 6,512 | 7 | **6,522** | 17,574 |

*(1) From 2009, risks covered by insurance contracts are no longer shown in commitments received, but are described in the notes if significant.*

## 36.1 Off-balance sheet commitments given

### 36.1.1 Operating commitments

#### 36.1.1.1 FIRM IRREVOCABLE PURCHASE COMMITMENTS

In the course of its generation and supply activities, EDF has entered into long-term and "take or pay" contracts involving commitments to purchase commodities, energy, gas and nuclear fuel for periods of up to 20 years.

In almost all cases, these are reciprocal commitments, and the third parties concerned are under an obligation to supply or purchase the quantities specified in the contracts.

At December 31, 2009, firm irrevocable purchase commitments mature as follows (in millions of current Euros):

| | Maturity | | | | 2009 | 2008 |
|---|---|---|---|---|---|---|
| *(in millions of Euros)* | < 1 year | 1 - 5 years | 5 - 10 years | > 10 years | | |
| Purchases of electricity | 2,382 | 3,109 | 2,984 | 7,992 | **16,467** | 16,124 |
| Purchases of gas and other energies | 1,014 | 2,684 | 1,598 | 347 | **5,643** | 6,302 |
| Purchases of nuclear fuels | 1,933 | 5,350 | 4,832 | 5,130 | **17,245** | 18,765 |
| **PURCHASE COMMITMENTS** | **5,329** | **11,143** | **9,414** | **13,469** | **39,355** | **41,191** |

#### ELECTRICITY PURCHASES

Electricity purchase commitments mainly concern:
- electricity purchases for Island Energy Systems (IES), which undertook in 2008 to purchase electricity generated by the plants of EDF's PEI subsidiaries;
- hedging contracts: these are forward purchases, for which the volumes and prices are set in contracts with EDF Trading.

In addition, under article 10 of the law of February 10, 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines, small hydropower and photovoltaic plants) or operations recycling organic waste. Most of these commitments concern purchases from co-generation plants, and to a lesser degree purchases from wind farms and hydropower plants and purchases of electricity produced by waste-burning.
The purchase volumes for 2009 totaled 28 TWh, including 13 TWh for co-generation, 8 TWh for wind power, and 4 TWh for hydropower.
The additional costs generated by this obligation are offset, after validation by the CRE, by the Contribution to the Public Electricity Service (*Contribution au service public de l'électricité* or CSPE) introduced by the law 2003-8 of January 3, 2003.

#### GAS AND OTHER ENERGY PURCHASES

Gas purchases for supply and delivery are mostly undertaken through long-term contracts.
Purchase commitments for other energies and commodities mainly concern coal and oil used to operate the fossil-fired plants.

#### NUCLEAR FUEL PURCHASES

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants designed to cover EDF's needs for uranium, enrichment and fluoration services and fuel assembly production. The decrease in commitments results mainly from the conclusion of contracts identified at December 31, 2008.

#### 36.1.1.2 COMMITMENTS RELATED TO ORDERS FOR OPERATING ITEMS AND FIXED ASSETS

These are reciprocal commitments totalling € 6,433 million undertaken upon signature of orders for fixed assets and operating items, or orders currently in progress, which include € 1,107 million for the construction of the EPR plant at Flamanville.

#### 36.1.1.3 OTHER OPERATING COMMITMENTS

These are mostly commitments by EDF as lessee under irrevocable operating lease contracts for premises, equipment and vehicles used in the normal course of business. The corresponding payments are subject to renegotiation at intervals defined in the contracts.

### 36.1.2 Financing commitments

These are commitments by EDF to subsidiaries, primarily € 1,975 million to EDF Energy, and € 500 million to EDF Trading.

### 36.1.3 Investment commitments

Agreement with Veolia Environnement: Veolia Environnement has granted EDF a call option on all its Dalkia shares in the event that a competitor of EDF would take control over Veolia Environnement. EDF has also granted Veolia Environnement a call option over all its Dalkia shares in the event of a change in EDF's statutes and if a competitor of Veolia Environnement were to take control over EDF, individually or with other parties. If the parties fail to agree on the sale price of the shares, it would be fixed by an independent expert.

In connection with the agreements signed in December 2008 by EDF Development Inc. and Constellation Energy Group, EDF provided a guarantee for payment of the obligations of the subsidiary ($5.6 billion). On November 6, 2009, $3.6 billion was paid upon finalization of the acquisition of 49.99% in Constellation Energy Nuclear Group.

The other component of guarantees given by EDF is a two-year put option entitling Constellation Energy Group to sell EDF Development Inc. certain non-nuclear generation assets for a value of up to $2 billion, subject to the required regulatory authorizations.

## 36.2 Off-balance sheet commitments received

### 36.2.1 Operating commitments

These mainly concern:
- reciprocal commitments totaling € 6,682 million, including € 6,433 million on orders for operating items and fixed assets;
- greenhouse gas emission quotas still receivable for the period 2010-2012, valued at € 412 million (31.4 million tonnes of $CO_2$).

### 36.2.2 Financing commitments

These commitments correspond to the value of credit lines available to EDF from various banks (€ 6.5 billion).

In 2009, EDF used then reimbursed the £11 billion syndicated credit line granted in late 2008 to finance the acquisition of British Energy.

# 36.3 Other types of commitments

## 36.3.1 Electricity supply commitments

EDF has signed several long-term contracts with a number of European electricity operators, undertaking to supply electricity. These contracts are of two types:

- co-financing agreements for nuclear power plants, either for a specific plant or for a defined group of plants. Companies participating in this financing are entitled to a share of the power generated by the plants concerned, in proportion to their initial contribution;
- long-term commercial sales contracts, generally covered by the nuclear power plants.

When investing in EnBW in 2001, EDF made a commitment to the European Commission to make some of its generation capacity available to the market for an initial duration of 5 years, in principle until February 7, 2006. The purpose of this arrangement was to facilitate competitors' access to the French market, to make up for supply difficulties on the emerging French market over the early years.
Since February 2006, EDF has had the right to file a documented application to withdraw from this auction procedure, but has chosen not to exercise this right to date. After discussions with the European Commission and upon a proposal by EDF, the Commission authorized certain adjustments to the auction process, primarily by introducing baseload products for a period of 4 years, on sale since September 2006, although the volume of energy made available annually by EDF is unchanged. In 2009, slightly more than 38 TWh (43 TWh in 2008) was thus made available on the market. The auctions continue today on a quarterly basis.

Following the dispute between EDF and Direct Énergie, the French competition authorities issued a ruling on December 10, 2007 accepting as obligations EDF's proposed commitments to make a significant volume of electricity (1,500 MW baseload, *i.e.* approximately 10 TWh per year over periods of up to 15 years) available to alternative suppliers in France at prices enabling them to compete effectively with EDF's offers on the deregulated mass market. For the initial 5-year period, 2008-2012, EDF proposed to apply an average baseload supply price in current Euros. This price amounted to € 39.4/MWh in 2009 (€ 36.8/MWh in 2008) and will progressively reach € 47.2/MWh in 2012. For the second 10-year period, the price has been fixed at a level that covers EDF's development costs for the Flamanville EPR.

EDF thus undertook three calls for tender for baseload electricity supply contracts on March 12, 2008, November 19, 2008 and November 18, 2009. The contracts concerned cover a total of 500 MW each, for periods of up to fifteen years. All 1,500 MW available were subscribed in these three tenders.

## 36.3.2 Insurance contracts

EDF has received commitments from insurance companies to cover the risks related to construction of the Flamanville EPR (€ 2,843 million).

## 36.3.3 Partnership between EDF and Enel

On November 30, 2007, EDF and Enel signed a strategic partnership agreement, under which Enel bears a 12.5% share in all construction, operation, decommissioning and back-end nuclear cycle management expenses for the Flamanville EPR-type nuclear plant, in return for access to 12.5% of the electricity generated by the EPR over its lifetime. The plant's nuclear operator is EDF, which bears full responsibility for its operations.
The partnership agreement also gives Enel the option of progressively acquiring the electricity generated by EDF's nuclear plants, up to a total capacity of 1,200 MW.

EDF and Enel entered into two industrial agreements in February 2009 for the development of nuclear power, following the agreement of November 2007.

On August 3, 2009, they formed a 50/50 joint venture named "Sviluppo Nucleare Italia SRL" to carry out feasibility studies for construction of at least four EPRs in Italy, in compliance with the first agreement between the two groups.

The second agreement extends Enel's involvement in France's new nuclear program, including the new EPR at Penly.

# Note 37 Environment



## 37.1 Greenhouse gas emission quotas

EDF has been allocated greenhouse gas emission quotas since 2005.

EDF's total quota allocation for 2009 is 16.6 million tonnes. The volume of emissions stood at 19 million tonnes (17.6 million tonnes at December 31, 2008).

The greenhouse gas emission quotas receivable for the period 2010-2012 are estimated at 31.4 million tonnes.

## 37.2 Energy savings certificates

In application of French law 2005-781 of July 13, 2005 defining the major lines of the national energy policy, which introduced a system of energy savings certificates for legal entities selling electricity, gas, heat or cold to end-users, and CNC emergency Committee opinion 2006-D of October 4, 2006 defining the relevant accounting treatment under French GAAP, EDF's financial statements reflect the management of energy savings certificates.

The energy savings obligations required of EDF for the three-year period July 1, 2006 to June 30, 2009 amount to 29,849 GWh in final energy cumulated and discounted ("*cumac*"). Through the energy-efficient offers organized for each market segment, EDF has met the obligations attributed by decision of October 17, 2007.

The Company is now awaiting definition of its obligations for the new period.

## 37.3 Carbon Fund

In November 2006, EDF set up a Carbon Fund to diversify its policy for obtaining greenhouse gas emission quotas and thereby reinforce its capacity to honor its environmental commitments in optimum economic conditions.

The aim of this fund is to support projects to reduce greenhouse gas emissions in emerging countries (in Asia and Latin America, for example) as part of the Clean Development Mechanism defined in the Kyoto protocol, and to obtain emission permits known as carbon emission reduction (CER) credits.

The Carbon Fund involves EDF and some of its European entities (EDF Energy, Edison, EnBW and EDF Trading), which will use the CER credits obtained. Credits can be surrendered in replacement of greenhouse gas emission quotas up to a certain limit, fixed at a percentage of the allocation from each State: 13.5% under the current National Quota Allocation Plan.

EDF's Carbon Fund is managed by EDF Trading, which develops and negotiates CER credit purchase contracts.

The Carbon Fund has no significant impact on EDF's financial statements at December 31, 2009.

# Note 38 Management compensation

The key management personnel are the Chairman of the Board of Directors, the Chief Officers until November 25, 2009, and the external members of the Board of Directors.

The total gross compensation paid by EDF (salaries, all types of benefits and director's fees, excluding employer contributions) to the Company's key management personnel for 2009 was as follows:

| *(in Euros)* | **2009** | 2008 |
|---|---|---|
| Management [1] | 3,431,215 | 3,255,771 |
| Governance bodies [2] | 223,000 | 148,250 |

*(1) Until November 25, 2009.*

*(2) The rise since 2008 principally results from a larger number of meetings of the Board of Directors.*

# Note 39 Subsequent events



## 39.1 Bond issues

On January 26, 2010, EDF issued a $2,250 million bond for institutional investors on the US market. This bond is governed by Rule 144A of the US Securities and Exchange Commission (SEC), and comprises two tranches:

- one 10-year tranche of $1,400 million with coupon of 4.60%;
- one 30-year tranche of $850 million, with coupon of 5.60%.

# Statutory auditors' Report on the financial statements

*This is a free translation into English of the statutory auditors' Report issued in French and is provided solely for the convenience of English-speaking readers. The statutory auditors' Report includes information specifically required by French law in such reports, whether qualified or not. This information is presented below the opinion on the financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions, or disclosures.*

*This report also includes information relating to the specific verification of information given in the Group management report and in the documents addressed to shareholders.*

*This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.*

## YEAR ENDED DECEMBER 31, 2009

To the Shareholders,

Following our appointment as statutory auditors by your Annual General Meeting, we hereby report to you, for the year ended December 31, 2009, on:

- the audit of the accompanying financial statements of Électricité de France SA;
- the justification of our assessments;
- the specific verifications and information required by law.

These financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements based on our audit.

### 1. OPINION ON THE FINANCIAL STATEMENTS

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting policies used and significant accounting estimates made, as well as the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at December 31, 2009 and of the results of its operations for the year then ended in accordance with French accounting principles.

Without qualifying our opinion, we draw your attention to the valuation of long-term provisions relating to nuclear electricity production, as described in notes 1.14 and 29, which results as indicated in note 1.2 from Management best estimates. This valuation is sensitive to the assumptions made concerning costs, inflation rates, long-term discount rates, and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning.

## 2. JUSTIFICATION OF OUR ASSESSMENTS

In accordance with the requirements of article L. 823-9 of the French Commercial Code (*"Code de commerce"*) relating to the justification of our assessments, we bring to your attention the following matters:

### ACCOUNTING PRINCIPLES AND POLICIES

Notes 1.3, 1.7 and 1.15 to the financial statements describe the principles and policies used for the accounting and valuation of revenues related to energy delivered but not yet measured or billed, valuation of financial investments and valuation of provisions for employee benefits.

As part of our assessment of the Company's accounting principles and methods, we have verified the appropriateness of the accounting methods used by the Company and of the information disclosed in the notes to the financial statements, and we verified the accuracy of the implementation of these accounting methods.

### ACCOUNTING ESTIMATES

Notes 1.14 and 29 and 1.15 and 30, respectively, disclose the underlying assumptions on which the valuation of long-term provisions relating to nuclear electricity production and the valuation of provisions and obligations for employee benefits are based. We have assessed the methodology used by the Company based on information available and performed sampling tests to verify the application of those methods.

These assessments were made as part of our audit of the financial statements, taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

## 3. SPECIFIC VERIFICATIONS AND INFORMATION

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors, and in the documents addressed to shareholders with respect to the financial position and the financial statements.

Concerning the information given in accordance with the requirements of article L. 225-102-1 of the French Commercial Code (*"Code de commerce"*) relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies controlled by your Company. Based on this work, we attest the accuracy and fair presentation of this information.

In accordance with French law, we have verified that the required information concerning the identity of the shareholders has been properly disclosed in the management report.

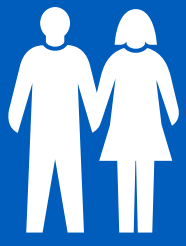
Paris-La Défense and Neuilly-sur-Seine, February 10, 2010

The statutory auditors

| **KPMG Audit**<br>***Department of KPMG S.A.*** | | **Deloitte & Associés** | |
|---|---|---|---|
| Jean-Luc Decornoy | Michel Piette | Alain Pons | Tristan Guerlain |

# Appendix E
# EDF Group

## Concordance table – Annual financial report



# Appendix E

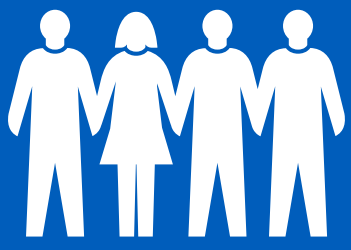
The 2009 annual financial report, prepared pursuant to articles L. 451-1-2 of the French Monetary and Financial Code (*Code monétaire et financier*) and 222-3 of the AMF General Regulations, is composed of *Document de référence* sections referred to in the following table:

| | Document de Référence sections |
|---|---|
| EDF financial statements | Appendix D |
| EDF group's consolidated financial statements | Section 20.1 |
| Management report | Chapter 9 (Group's activities)<br>Chapter 4 (Risks factors)<br>Section 21.1.5 (financial authorisations)<br>Chapters 18 to 21 (information relating to share capital structure and composition, exercise of the voting rights, directors appointment)<br>Chapter 16 (powers of the Board of Directors)<br>Chapter 15 (directors' allowance)<br>Section 21.1.2 (Ownership of shares and control by the Company) |
| Certification from the person responsible for the annual financial report | Section 1.2 |
| Statutory auditors' report on EDF financial statements | Appendix D |
| Statutory auditors' report on EDF consolidated financial statements | Section 20.2 |

# Appendix E

# Appendix F
# EDF GROUP

## Resolutions subject to the Combined Shareholders' Meeting on May 18, 2010



# Appendix F

## Ordinary Meeting Agenda

- Reports from the Board of Directors.
- Reports from the statutory auditors.
- Approval of the financial statements for the year ended December 31, 2009.
- Approval of the consolidated financial statements for the year ended December 31, 2009.
- Allocation of net income for the year ended December 31, 2009 as reported in the financial statements and determination of dividends.
- Agreements governed by article L. 225-38 of the French Commercial Code.
- Directors' fees.
- Authorization for the Board of Directors to carry out transactions on the Company's shares.

## Extraordinary Meeting Agenda

- Delegation of authority to the Board of Directors to issue shares or marketable securities, maintaining the shareholders' preferential subscription right.
- Delegation of authority to the Board of Directors to issue, by means of public offerings, shares or marketable securities, with no preferential subscription rights for shareholders.
- Delegation of authority to the Board of Directors to issue, by means of offers referred to in article L. 411-2 II of the French monetary and financial code, shares or marketable securities, with no preferential subscription rights for shareholders.
- Authorization for the Board of Directors to increase the number of shares to be issued in the event of a capital increase, with or without preferential subscription rights for shareholders.
- Delegation of authority to the Board of Directors to increase the capital by capitalization of reserves, profits, premiums or other amounts eligible for capitalization.
- Delegation of authority to the Board of Directors to increase the capital as a result of a public exchange offer instigated by the Company.
- Authorization for the Board of Directors to increase the capital in return for contributions in kind granted to the Company
- Delegation of power to the Board of Directors to increase the capital to the benefit of members of savings plan.
- Authorization for the Board of Directors to reduce the capital.
- Powers for formalities.

### ORDINARY MEETING

#### FIRST RESOLUTION:

**(Approval of the financial statements for the year ended December 31, 2009)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the management report from the Board of Directors and the reports of the statutory auditors, approves the financial statements for the year ended December 31, 2009 comprising the balance sheet, income statement and appendix, as presented, and the operations reflected in those financial statements and summarized in those reports. It sets the profit for the year at €4,579,555,110.71.

It is emphasized that the overall sum of expenses and charges concerned by article 223 quater of the French tax code is €1,465,167.

#### SECOND RESOLUTION:

**(Approval of the consolidated financial statements for the year ended December 31, 2009)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the management report of the Board of Directors and the report of the statutory auditors on the consolidated financial statements, approves the consolidated financial statements for the year ended December 31, 2009 comprising the consolidated balance sheet, consolidated income statement and appendix, as presented, and the operations reflected in those financial statements and summarized in those reports.

#### THIRD RESOLUTION:

**(Allocation of the net income for the year ended December 31, 2009, as reported in the financial statements, and distribution of dividends)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors on the financial statements:

(i) notes that the distributable profit, taking into account the positive amount of retained earnings and before deducting the interim dividend described below, amounts to €10,029,629,260.88;

(ii) decides to allocate to the legal reserve an amount of €1,334,778.60, bringing it to 10% of the share capital;

(iii) decides to allocate to the free reserve an amount of €3,000,000,000;

(iv) decides to set the dividend at €1.15 per share;

(v) notes that, given that an interim dividend of €0.55 per share was paid on December 17, 2009, the balance of the dividend to be distributed amounts to €0.60 per share;

(vi) decides to allocate the balance of the distributable profit to retained earnings.

The new shares delivered in payment of the interim dividend referred to above, shall only entitle to the balance of the dividend to be distributed (€0.60 per share).

The total dividend (including the total amount of the interim dividend), based on the number of shares as of December 31, 2009, amounts to a maximum of €2,111,514,096.70 given that any shares held by the Company at the date of distribution of the dividend will not confer rights to the dividend.

The Shareholders' Meeting gives all powers to the Board of Directors to determine, in light of the number of shares held by the Company at the date of the distribution of the dividend, the total amount of the dividend and, consequently, the amount of the balance of distributable profits allocated to retained earnings.

The balance of the dividend to be distributed will be paid on June 3, 2010.

The total dividend is eligible for the special 40% tax allowance under paragraph 3-2° of article 158 of the French tax code, to the benefit of individuals who have their tax domicile in France and are subject to income tax, in application of the legal conditions and limits.

Dividends distributed in the past three years were as follows:

| Year | Number of shares | Dividend per share (in Euros) | Total dividends paid (after deduction eligible for the of treasury shares) (in Euros) | Portion eligible for the tax allowance(1) |
|---|---|---|---|---|
| 2006 | 1,822,171,090 | 1.16 | 2,113,624,504.40 | 100% |
| 2007 | 1,822,171,090 | 1.28 | 2,330,266,755.20 | 100% |
| 2008 | 1,822,171,090 | 1.28 | 2,328,200,485.12 | 100% |

*(1) Special 40% tax allowance under paragraph 3-2° of article 158 of the French tax code.*

## FOURTH RESOLUTION:

**(Agreements governed by article L. 225-38 of the French commercial code)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the special report of the statutory auditors on agreements governed by article L. 225-38 of the French Commercial Code, takes note of the conclusions of the report.

## FIFTH RESOLUTION:

**(Additional directors' fees awarded to the board of directors for 2009)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors, decides to set the amount of additional directors' fees awarded to the members of the Board for the year ended December 31, 2009 at €2,250.

## SIXTH RESOLUTION:

**(Directors' fees awarded to the Board of Directors)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors, decides to set the amount of directors' fees awarded to the members of the Board for the current year and future years at €190,000, until a further decision is made by the Shareholders' Meeting.

## SEVENTH RESOLUTION:

**(Authorization for the Board of Directors to engage in transactions on the company's shares)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Ordinary Shareholders' Meetings, after examination of the report of the Board of Directors,

- terminates, with immediate effect, the unused portion of the authorization to purchase shares in the Company given by the Shareholders' Meeting of May 20, 2009 in the 7th resolution and
- authorizes the Board of Directors to purchase shares in the Company with a view to:
  - remitting shares when rights are exercised attached to marketable securities representing debt instruments giving access by any means, immediately or at a later date, to shares in the Company, and carrying out all hedging operations for the obligations of EDF (or one of its subsidiaries) in respect of those marketable securities,
  - holding shares for future remittal in exchange or payment for any external growth operations,
  - ensuring the liquidity of EDF's share by an investment service provider through a liquidity contract coherent with the code of ethics recognized by the French market authority,
  - attributing shares to members of EDF Group employees, notably under any share purchase or free share allocation plan benefiting members or former members of personnel in the conditions set forth by the law, particularly articles L. 225-197-1 and following of the French Commercial Code or articles L. 3332-18 and following of the French labor code (including any transfer of shares covered by these articles of the labor code), and carrying out all hedging operations for these operations,
  - reducing the Company's capital by canceling all or some of the shares purchased.

Purchases of shares in the Company may concern a number of shares such that:

- the number of shares the Company purchases during the period of a repurchase program must not exceed 10% of shares making up the share capital at the day of this Shareholders' Meeting, it being specified that when shares are redeemed to ensure the liquidity of the EDF share under the conditions defined above, the number of shares taken into account for calculating the 10% limit is the number of shares purchased net of the number of shares sold during the term of this authorization;
- the number of shares the Company holds directly or indirectly at any time must not exceed 10% of the shares making up the Company's share capital.

Acquisitions or transfers of these shares may be carried out by all means, particularly on a market or over the counter, including via acquisition or transfer of blocks, use of derivative financial instruments or notes or securities giving access to the Company's shares, or by setting up options, at such times that the Board of Directors or the person acting on its authority shall decide.

The maximum amount of funds dedicated to execution of this share repurchase program shall be €2 billion.

The purchase price shall not exceed €90 per share; however, the Board of Directors may adjust the maximum purchase price in the event of capitalization of premiums, reserves or profits resulting in either a rise in the nominal value of shares or in creation and attribution of free shares, and in the event of a share split or reverse share split, or any other operation affecting equity, to reflect the effect of these operations on the share value.

This authorization is granted for a maximum duration of 18 months from the date of this meeting.

The Board of Directors shall have all powers to implement this authorization, and may delegate its authority, in order to place all orders in the stock exchange or off-market, allocate or reallocate the shares acquired to the various objectives pursued, under the applicable legal and regulatory conditions, complete all formalities, and in general do everything that is necessary.

The Board of Directors must inform the Shareholders' Meeting each year of the transactions undertaken in application of this resolution.

## EXTRAORDINARY MEETING

### EIGHTH RESOLUTION:

**(Delegation of authority to the Board of Directors to increase the capital, maintaining the shareholders' preferential subscription right)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with articles L. 225-129 to L. 225-129-6 and L. 228-91 to L. 228-97 of the French Commercial Code:

- terminates, with immediate effect, the unused portion of the delegation of authority given by the Shareholders' Meeting of May 20, 2009 in its 8th resolution;
- authorizes the Board of Directors to decide to issue, in one or more issuances, while maintaining the shareholders' preferential subscription right, (i) shares in the Company,(ii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in the Company, (iii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in a company of which the Company directly or indirectly holds more than half of the capital (the "Subsidiary"), for subscription in cash or by offsetting against existing debt;
- also authorizes the Board of Directors to decide to issue marketable securities carrying a right to attribution of Company debt instruments in one or more issuances.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45,000,000 (the "Ceiling").

It is emphasized that (i) this Ceiling is common to all capital increases undertaken immediately or at a later date under the 8th, 9th, 10th, 11th, 13th and 14th resolutions proposed at this Shareholders' Meeting, and the nominal value of such increases shall therefore be deducted from the Ceiling; (ii) the Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The marketable securities giving access to the capital of the Company or a Subsidiary issued in this way may consist of debt instruments or be associated with issuance of such instruments, or allow their issuance as intermediary securities.

Debt instruments issued under this delegation of authority may take the form of subordinated securities, perpetual or otherwise, issued in Euros or other currencies.

Securities issued may carry warrants for attribution, acquisition or subscription of bonds or other marketable securities representative of debt instruments.

The nominal value of debt instruments issued shall not exceed €4,500,000,000. It is emphasized that this maximum is common to all debt instruments issued under the 8th, 9th, 10th, 11th, 13th and 14th resolutions proposed at this Shareholders' Meeting.

Company share subscription warrants may be issued through a subscription offer, but also through free attribution to holders of existing shares and, but also by free award to the holders of existing shares. In the case of free award of autonomous subscription warrants, the Board of Directors may decide that fractional subscription rights will be non transferable and that the corresponding shares will be sold.

The Board of Directors may take any and all measures to protect the rights of holders of marketable securities giving access to the capital existing at the day of the capital increase.

Shareholders may, in compliance with the law, exercise their preferential subscription right for new shares as of right. The Board of Directors shall also be entitled to award shareholders a subscription right for excess shares, concerning a higher number of shares or marketable securities giving access to the capital than the number they could subscribe as of right, proportionally to the subscription rights held and in any event up to the limit of their share application.

If the subscriptions as of right, together where relevant with subscriptions for excess shares, do not absorb the entire issue of securities, the Board of Directors may take one or more of the following steps, in the order of its choice:

- limit the issue to the quantity of subscriptions received, provided this quantity is at least three quarters of the planned issue;
- freely allocate all or some of the shares unsubscribed as of right, and where relevant excess unsubscribed shares;
- offer all or some of the unsubscribed shares to the public.

The Shareholders' Meeting notes that, to the benefit of holders of the marketable securities giving access to the Company's capital issued under this resolution, this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares associated with those newly-issued marketable securities.

The Board of Directors shall have all powers to implement this authorization, and in particular to determine the characteristics of the marketable securities to be issued by the Company, to set the issue date, which may be retroactive, and, if applicable, the conditions of their redemption, to suspend, if applicable, the exercise of the right to share allocation attached to the Company's securities according to the applicable laws and regulations, to perform any adjustments designed to take into account the impact of transactions on the capital of the Company, to set the terms and conditions allowing to secure the rights of holders of securities giving access at a later date to the share capital of the Company, to modify the terms and conditions of the securities to be issued under this resolution while such securities remain outstanding in compliance with the applicable formalities, to perform all necessary deductions on the issuance premium and more generally to take all appropriate actions to complete the issuances.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

### NINTH RESOLUTION:

**(Delegation of authority to the Board of Directors to increase the capital, with no preferential subscription rights for shareholders)**

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with articles L. 225-129 to L. 225-129-6, L. 225-135 and L. 225-136, and L. 228-91 to L. 228 97 of the French Commercial Code:

- terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 9th resolution;
- authorizes the Board of Directors to decide to issue, through public offers, in one or several issuances, with no preferential subscription rights for shareholders, (i) shares of the Company, (ii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in the Company, (iii) marketable securities
- giving access by any means, immediately or at a later date, to shares existing or to be issued in a company of which the Company directly or indirectly holds more than half of the capital (the "Subsidiary"), for subscription in cash or by offsetting against existing debt;
- also authorizes the Board of Directors to decide to issue marketable securities carrying a right to attribution of Company debt instruments through.

Public offer(s) decided under this resolution may be associated, as part of a single issuance or as separate issuances occurring at the same time, to (an) offer(s) defined in Article L. 411-2, II, of the French monetary and financial code, decide based on the 10th resolution proposed at this Shareholders' Meeting.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45,000,000 (the "Ceiling").

It is emphasized that (i) this Ceiling is common to all capital increases undertaken immediately or at a later date under the 8th, 9th, 10th, 11th, 13th and 14th resolutions proposed at this Shareholders' Meeting, and the nominal value of such increases shall therefore be deducted from the Ceiling; (ii) the Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The marketable securities giving access to the capital of the Company or a Subsidiary issued in this way may consist of debt instruments or be associated with issuance of such instruments, or allow their issuance as intermediary securities.

Debt instruments issued under this delegation of authority may take the form of subordinated securities, perpetual or otherwise, issued in Euros or other currencies;

The total nominal value of all debt instruments issued under this resolution shall not exceed, and shall be deducted from, the Ceiling for debt securities defined in the 8th resolution proposed at this Shareholders' Meeting.

The Shareholders' Meeting decides to eliminate the shareholders' preferential subscription right for shares and marketable securities to be issued based on this resolution, but the Board of Directors shall be entitled to grant to the shareholders a priority subscription right for shares in excess or subscriptions as of right, for a duration to be determined in compliance with applicable laws and regulations, for all or part of the issuance, in accordance with the second paragraph of article L. 225-135 of the French Commercial Code. This subscription priority would note lead to the creation of negotiable rights.

If the subscriptions, including, if necessary, any subscription by shareholders, do not absorb the entire issue of securities, the Board of Directors may limit the issue to the quantity of subscriptions received, provided this quantity is at least three quarters of the planned issue.

The Shareholders' Meeting notes that, to the benefit of for holders of the marketable securities giving access to the Company's capital issued under this resolution, this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares concerned by those newly-issued marketable securities.

The Shareholders' Meeting decides that:

- the issue price of shares issued directly shall be at least equal to the weighted average of the opening price of the Company's shares for the three trading sessions of the Euronext Paris market preceding the date at which the subscription price for the capital increase is set, less a discount of a maximum of 5% if required, after correction of the average if necessary due to differences in the shares' issue dates;
- the issue price of marketable securities giving access to the capital shall be such that the sum immediately received by the Company, plus any further sum likely to be received if applicable, is no less than the minimum subscription price defined in the above paragraph for each share issued as a result of issuance of these marketable securities.

The Board of Directors shall have all powers to implement this authorization, and in particular to determine the characteristics of the marketable securities to be issued by the Company, to set the issue date, which may be retroactive, and, if applicable, the conditions of their redemption, to suspend, if applicable, the exercise of the right to share allocation attached to the Company's securities according to the applicable laws and regulations, to perform any adjustments designed to take into account the impact of transactions on the capital of the Company, to set the terms and conditions allowing to secure the rights of holders of securities giving access at a later date to the share capital of the Company, to modify the terms and conditions of the securities to be issued under this resolution while such securities remain outstanding in compliance with the applicable formalities, to perform all necessary deductions on the issuance premium and more generally to take all appropriate actions to complete the issuances.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## TENTH RESOLUTION:

### (Delegation of authority to the Board of Directors to issue, by means of offers referred to in article L.411-2 II of the French monetary and financial code, shares or marketable securities, with no preferential subscription rights for shareholders)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with articles L. 225-129 to L. 225-129-6 and L. 228-91 to L. 228-97 of the French Commercial Code:

- authorizes the Board of Directors to decide to issue, by means of offers pursuant to article L.411-2 II of the French monetary and financial code, in one or more issuances, with no preferential subscription rights for shareholders, (i) shares in the Company, (ii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in the Company, (iii) marketable securities giving access by any means, immediately or at a later date, to shares existing or to be issued in a company of which the Company directly or indirectly holds more than half of the capital (the "Subsidiary"), for subscription in cash or by offsetting against existing debt;
- also authorizes the Board of Directors to decide to issue marketable securities carrying a right to attribution of Company debt instruments.

Public offer(s) decided under this resolution may be associated, as part of a single issuance or as separate issuances occurring at the same time, to (an) offer(s) defined in Article L. 411-2, II, of the French monetary and

financial code, decide based on the 10th resolution proposed at this Shareholders' Meeting.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken pursuant to this resolution shall not exceed €45 million (the "Ceiling") on the one hand, and the legal ceiling (i.e., as of the date of this meeting, 20% of the share capital per year) on the other hand.

It is emphasized that (i) this Ceiling is common to all capital increases undertaken immediately or at a later date under the 8th, 9th, 10th, 11th, 13th and 14th resolutions proposed at this Shareholders' Meeting, and the nominal value of such increases shall therefore be deducted from the Ceiling; (ii) the Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The marketable securities giving access to the share capital of the Company or of a Subsidiary issued in this manner may consist of debt instruments or be associated with the issuance of such instruments, or allow their issuance as intermediary securities.

Debt instruments issued under this delegation of authority may take the form of subordinated or unsubordinated securities, perpetual or otherwise, issued in Euros or other currencies.

The total nominal value of all debt instruments issued under this resolution shall not exceed, and shall be deducted from, the Ceiling for debt securities set forth in the 8th resolution proposed at this Shareholders' Meeting.

The Shareholders' Meeting decides to eliminate the shareholders' preferential subscription right with respect to the shares and marketable securities to be issued, based on this resolution.

If the subscriptions do not absorb the entire issue of securities, the Board of Directors may limit the issue to the amount of subscriptions received, provided this amount is at least three quarters of the planned issue.

The Shareholders' Meeting notes that, to the benefit of for holders of the marketable securities giving access to the Company's capital issued under this resolution, this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right with respect to the shares to which those newly-issued marketable securities give right.

The Shareholders' Meeting decides that:

- the issue price of shares issued directly shall be at least equal to the weighted average of the opening price of the Company's shares for the three trading sessions of the Euronext Paris market preceding the date at which the subscription price for the capital increase is set, less a discount of a maximum of 5% if required, after correction of the average if necessary due to differences in the shares' issue dates;
- the issue price of marketable securities giving access to the capital shall be such that the sum immediately received by the Company, plus any further sum likely to be received if applicable, is no less than the minimum subscription price defined in the above paragraph for each share issued as a result of issuance of these marketable securities.

The Board of Directors shall have all powers to implement this authorization, and in particular to determine the characteristics of the marketable securities to be created by the Company, to set the date of holding, which may be retroactive, of the securities to be issued, and if any, the conditions of their redemption, to suspend, if any, the exercise of the right to shares allocation attached to the Company's securities according to the applicable law and regulation, to perform adjustments designed to take into account operations impact on the capital of the Company, to set the modalities according to which the rights of holders of shares giving access at a later date to the capital shall be secured, to modify the modalities of the securities to be issued under this resolution during the lifetime of the securities concerned in compliance with the applicable formalities, to perform all necessary deductions on the issuing premium and more generally to take all appropriate actions.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## ELEVENTH RESOLUTION:

### (Authorization for the Board of Directors to increase the number of shares to be issued in the event of a capital increase, with or without preferential subscription rights for shareholders)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with article L. 225-135-1 of the French commercial code, authorizes the Board of Directors to decide to increase the number of shares to be issued for each of the issues undertaken in application of the 8th, 9th and 10th resolutions proposed to the Shareholders' Meeting, within the periods and limits prescribed by the law and regulations applicable on the date of the issue (currently, within thirty days after subscription is closed, up to a limit of 15% of the initial issue and at the same price as the initial issue), subject to respect of the Ceiling(s) defined in the resolution under which the issue is undertaken.

The Shareholders' Meeting terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 10th resolution.

The authorization given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## TWELFTH RESOLUTION:

### (Delegation of authority to the Board of Directors to increase the capital by capitalization of reserves, profits, premiums or other amounts eligible for capitalization)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors, in accordance with articles L. 225-129 to L. 225-129-6 and L. 225-130 of the French commercial code:

- Terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 11th resolution; and,
- Delegates its authority to the Board of Directors to increase the capital, in one or more times, by capitalization of reserves, profits, premiums or other amounts eligible for capitalization, or to do so in conjunction with a capital increase in cash undertaken under the previous resolutions, or in the form of attribution of free shares or an increase in the nominal value of existing shares, or in a combination of the two;
- Decides that the total nominal value of the capital increase, immediately or at a later date, undertaken under this resolution shall not exceed €1,000,000,000. It is emphasized that (i) this ceiling is separate from and independent of the ceilings for capital increases resulting from issues of shares or marketable securities authorized by the 8th, 9th, 10th, 11th, 13th and 14th resolutions proposed at this Shareholders' Meeting, and (ii) this ceiling does not include shares in the Company that may be issued

in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

The Board of Directors may decide that fractional subscription rights will be non-transferable and that the corresponding shares will be sold; the proceeds of such sale will be allocated to holders of the rights within the period defined by the regulations.

The Board of Directors shall have all powers to determine, in particular, the characteristics and conditions of the authorized transactions and in particular to set the amount and nature of the reserves and premiums to be incorporated in the share capital, to set the number of new shares to be issued or the amount by which the nominal value of the existing shares will be increased, to set the date of holding, which may be retroactive, of the securities to be issued or the date at which the increase in the nominal value of the existing shares will be effective, and perform all necessary deductions on the issuance premium and in particular the deduction of expenses in connection with the issuances, and more generally to take all appropriate actions to complete the issuances.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## THIRTEENTH RESOLUTION:

### (Delegation of authority to the Board of Directors to increase the capital as a result of an exchange offer instigated by the company)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with articles L. 225-129-2, L. 225-148 and L. 228-91 and following of the French commercial code,

- Terminates, with immediate effect, the unused portion of the delegation of authority given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 12th resolution; and,
- Delegates its authority to the Board of Directors, on the basis and terms defined in the 9th resolution (except for price related matters set forth in this resolution), to decide to issue shares in the Company or marketable securities giving access to shares in the Company already issued or to be issued, in exchange for securities tendered to a public offer which includes an exchange component (as a principal or subsidiary) instigated by the Company in or outside France, in accordance with local rules, in respect of shares in a company whose shares are admitted to trading on a regulated market as concerned by article L. 225-148 mentioned above, and decides, to the benefit of bearers of the newly-issued securities, to eliminate, if necessary, the shareholders' preferential subscription right for those shares and marketable securities;
- Notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to shares associated with any marketable securities to be issued under this delegation of authority.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45,000,000, and the total nominal value of the capital increases undertaken under this resolution shall be deducted from the Ceiling for the overall nominal value of capital increases set forth in the 9th resolution proposed at this Shareholders' Meeting.

This Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

- Decides that the total nominal value of the debt instruments issued under this resolution shall not exceed, and shall be deducted from, the ceiling for debt instruments defined in the 8th resolution proposed at this Shareholders' Meeting;
- Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to:
  - carry out the public offers concerned by this resolution,
  - set the exchange ratio and the amount of cash payment if applicable,
  - set the dates and issue conditions, particularly the price and issue date, of shares or where relevant marketable securities giving access to shares in the Company and, where necessary, amend the characteristics of the securities issued under this resolution during the lifetime of the securities concerned in compliance with the applicable formalities,
  - register in the "Contribution premium" in the balance sheet liabilities, relative to the rights of all shareholders, the difference between the issue price and nominal price of the new shares, and if necessary deduct from this contribution premium account all expenses incurred in connection for the purpose of the authorized operation, – in general take all appropriate action and enter into any and all agreements.

The delegation of authority to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## FOURTEENTH RESOLUTION:

### (Authorization for the Board of Directors to increase the capital in return for contributions in kind granted to the company)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with article L. 225-147 and articles L. 228-91 and following of the French commercial code:

- terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 13th resolution; and,
- authorizes the Board of Directors to increase the capital by a maximum of 10% of the existing capital (at the date of this meeting), in view of the report of the appraiser (*commissaire aux apports*), in remuneration of contributions in kind made to the Company, in the form of shares or marketable securities giving access to the capital when the provisions of article L. 225-148 of the French commercial code do not apply.

Under this authorization, the Board of Directors will decide after examination of the report(s) of the statutory auditors, in accordance with article L. 225-147 of the French commercial code.

The total nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €45.000.000 and the total nominal value of the capital increases undertaken under this resolution shall be deducted from the Ceiling for the overall nominal value of capital increases set forth in the 9th resolution proposed at this Shareholders' Meeting.

This Ceiling does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company.

- Decides that the total nominal value of all debt instruments issued under this resolution shall not exceed, and shall be deducted from, the Ceiling for debt securities defined in the 8th resolution proposed at this Shareholders' Meeting;

- Decides, to the benefit of holders of the shares or marketable securities issued in exchange for the contribution in kind, to eliminate the shareholders' preferential subscription right to the shares and marketable securities issued in this way.
- The Meeting records the fact that this delegation of authority automatically entails a waiver by the shareholders of their preferential subscription right to the shares associated with any marketable securities to be issued under this delegation of authority;
- Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to determine the terms and conditions of the authorized operations, including valuing the contribution and where relevant granting special benefits and formally acknowledging execution of the capital increase and amending the bylaws accordingly.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## FIFTEENTH RESOLUTION:

### (Delegation of power to the Board of Directors to increase the capital to the benefit of members of the EDF Group Savings Plan)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with article L. 225-129-6, L. 225-138 I and II and L. 225-138-1 of the French commercial code and articles L. 3332-18 and following of the French labor code:

- Terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 14th resolution;
- Grants the Board of Directors full powers in order to increase the capital of the Company, in one or several issuances, by an issue of shares or marketable securities giving access to the shares in the Company already issued or yet to be issued, reserved for members of company savings plans (or other plan for which article L. 3332-18 of the French labor code would allow a capital increase in similar conditions) at the level of the Company or the EDF Group, established by the Company or other French or foreign companies consolidated in the accounts of the Company according to Articles L. 3344-1 and L. 3344-2 of the French labor code;
- Fixes the ceiling of the nominal value of the capital increase, immediately or at a later date, resulting from all issues undertaken under this resolution shall not exceed €10.000.000. This limit does not include shares in the Company that may be issued in connection with adjustments to preserve the rights of holders of marketable securities giving access to the capital of the Company;
- Fixes the discount at 20% relative to the average opening price of the Company's share over the twenty trading sessions of the Euronext Paris market preceding the date of the decision fixing the opening date for subscriptions. However, the Shareholders' Meeting expressly authorizes the Board of Directors to reduce or eliminate this reduction if it deems such action appropriate, in view of factors such as locally applicable legal, accounting, tax or social systems;
- Decides that the Board of Directors may, within the limits prescribed by the law and regulations applicable, attribute for no consideration shares already issued or to be issued, or other securities giving access to the Company's capital already issued or to be issued, in conformance with the company's additional contribution for employees, or if need be with the reduction;
- Decides, to the benefit of the beneficiaries mentioned above, to eliminate the shareholders' preferential subscription right concerning the shares and marketable securities to be issued under this resolution, and to waive all rights to shares or other securities attributed for no consideration in application of this delegation of authority;
- Decides that the Board of Directors shall have all powers to implement this authorization, and in particular to:
  - determine the scope, the terms and conditions of operations and set the dates and conditions of the issues to be made under this authorization;
  - set the opening and closing dates for subscriptions, the issue dates, the methods for payment of the shares and other marketable securities giving access to the Company's capital;
  - grant extensions for settlement of the shares and, where relevant, other marketable securities giving access to the Company's capital, apply for admission to trading for the newly issued securities in any place it wishes.

The delegation of authority given to the Board of Directors under this resolution is valid for a duration of 26 months from the date of this meeting.

## SIXTEENTH RESOLUTION:

### (Authorization for the Board of Directors to reduce the capital)

The Shareholders' Meeting, deliberating in compliance with the quorum and majority requirements for Extraordinary Shareholders' Meetings, after examination of the report of the Board of Directors and the report of the statutory auditors, in accordance with article L. 225-209 of the French commercial code:

- Terminates, with immediate effect, the unused portion of the authorization given by the Extraordinary Shareholders' Meeting of May 20, 2009 in its 15th resolution, and;
- Authorizes the Board of Directors to reduce the capital by cancellation of all or some of the shares purchased under the Company's share repurchase program, by up to 10% of the existing capital in 24-month periods. This 10% limit applies to the amount of the Company's capital, adjusted if necessary to take into account operations affecting the share capital after the date of this meeting.
- Authorizes the Board of Directors to allocate the difference between the repurchase value and nominal value of cancelled shares to the available premiums and reserves.
- Grants all powers to this end to the Board of Directors, with the possibility of subdelegation as permitted by the law and regulations applicable, to set the terms and conditions and amend the Company's bylaws accordingly, and more generally to take all necessary action.

The authorization given to the Board of Directors under this resolution is valid for a duration of 18 months from the date of this meeting.

## SEVENTEENTH RESOLUTION:

### (Powers for formalities)

The Shareholders' Meeting grants all powers to the bearer of an original, a copy or an extract of the minutes of this meeting to carry out all legal and administrative formalities, and file and register all information required by the laws in force.

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and

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