This presentation is for information purposes only and does not constitute an offer or solicitation to sell or buy instruments, part of the company or the assets described here, in the US or any other country.

This presentation contains forward-looking statements or information. While EDF believes that the expectations reflected in these forward-looking statements are based on reasonable assumptions at the time they were made, these assumptions are fundamentally uncertain and imply a certain amount of risk and uncertainty which is beyond the control of EDF. As a result, EDF cannot guarantee that these assumptions will materialise. Future events and real financial and other outcomes may differ materially from the assumptions used in these forward-looking statements, including, and not limited to, potential timing differences and the completion of transactions described therein.

Risks and uncertainties (notably linked to the economic, financial, competition, regulatory and climate backdrop) may include changes in economic and business trends, regulations, as well as those described or identified in the publicly-available documents filed by EDF with the French financial markets authority (AMF), including those presented in Section 2.2 “Risks to which the Group is exposed” of the EDF Universal Registration Document (URD) filed with the AMF on 17 March 2022 (under number D.22-0110), which may be consulted on the AMF website at www.amf-france.org or on the EDF website at www.edf.fr, including the management report as of end-December 2021.

EDF does not undertake nor does it have any obligation to update forward-looking information contained in this presentation to reflect any unexpected events or circumstances arising after the date of this presentation.
BEFORE STARTING…

THE MAIN FOCUS OF THESE FACTS & FIGURES

- **On the road to carbon neutrality:**
  - **CSR:** achievements, new targets & reduction of CO₂ emissions
  - French government supports in **nuclear Small Modular Reactors (SMR)** and **EPR2** reactors
  - **Nuclear power included in European Taxonomy**
  - **New Hydrogen Plan**
  - Growth and new targets for the **Electric Mobility Plan**

- **An overview of regulated activities** (Enedis, Linky, etc.)

- **Updates on renewable energies** (pipeline breakdown, etc.) and growth prospects

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**Reading suggestions**

- To help you understand the terms used, you will find a **glossary** at the end of the document
- You will also find “Did you know?” takeaway boxes throughout the document that shed light on specific content
- Much more information is available in our URD, which you can download via:


**Browsing suggestions**

- **Hypertext links** have been included to help you browse this document in tables of contents
- **Clicking on the EDF logo** (in the footer) will bring you back to the main table of contents (page 5)
- The name of the chapter can be found at the bottom of each page
- **Clicking on the title of the chapter** (in the footer) will bring you back to the beginning of this chapter
The EDF's *raison d'être* is in line with the values of progress and sharing that have inspired EDF's actions since its creation, as well as with today's major issue of addressing climate change and preserving the planet. The key issues surrounding its *raison d'être* have been formalised in 16 CSR commitments adopted by all the Group's business lines and subsidiaries, focusing on major environmental, social and societal issues.
THE EDF GROUP

➢ GROUP STRATEGY

➢ CORPORATE RESPONSIBILITY - CSR

➢ HIGHLIGHTS

➢ INNOVATION & TRANSFORMATION

➢ GOVERNANCE

P. 6

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EDF GROUP 2021 KEY FIGURES

Operational figures as of end 2021

- **38.5 million** customer sites
- **117.3GW (1)** installed capacity
- **523.7TWh** electricity output (3)
- **167,157** employees o.w. 63,070 at EDF, 38,701 at Enedis, 16,551 at Framatome, 18,451 at Dalkia and 11,141 at EDF Energy

### 2021 Financials

- **Sales:** €84.5bn
- **EBITDA:** €18.0bn
- **Net income excluding non-recurring items (6):** €4.7bn
- **Net investments (7):** €15.7bn
- **Net financial debt:** €43.0bn
  - Cash flow: -€1.5bn
  - Net finance debt / EBITDA ratio: 2.39x
- **Ratings (8):** BBB negative (S&P) / Baa1 negative (Moody's) / BBB+ negative (Fitch)

### 2021 CSR data

- **94%** of Group investments were in line with the Group’s net-zero emissions trajectory
- **CO₂ emissions:** 48gCO₂/kWh decreasing vs 2020 and 1st in the world ranking of 2020 producers (9) without direct CO₂ emissions
- **Gender equality:** 29.8% of women in management committees

---

(1) Consolidated capacities of EDF group
(2) Figures including the shutdown of the Le Havre coal power in April 2021
(3) Output from fully consolidated entities
(4) Hydro output including pumping
(5) Direct carbon emissions related to generation, excluding life cycle assessment (LCA) of production means and fuels
(6) Net income excluding non-recurring items is not defined by IFRS standards, but it is visible in the note 19.1 of the consolidated financial statements.
(7) Net total investments including acquisitions, excluding disposal plan
(8) Sources: rating agencies as of 28/03/2022
Enerdata Power Plant Tracker www.enerdata.net
EDF SINCE 1946

1946
- Nationalisation of the electricity and gas sectors
- Creation of EDF as an EPIC (1) in accordance with the law of 8 April 1946

1963
- Launch of the commercial-scale nuclear program

1990
- Development of the French industrial base, including hydroelectric and nuclear power plants

1999
- Acquisition by EDF of Dalkia's activities in France

2004
- On 20 November 2004, EDF becomes a French commercial company (SA)
- IPO in 2005 and creation of RTE to guarantee non-discriminatory access to the market

2005
- Acquisition of Edison’s takeover

2009
- Edison’s takeover

2011
- Acquisition of Framatome capital
- Signature of final contracts for Hinkley Point C EPR construction project in the UK

2012
- Step up in offshore wind

2014
- Commissioning of Taishan Unit 2

2016
- Commissioning of the Sinop hydropower plant in Brazil
- Success of the first fourth ten-year inspection of 900MW fleet (Tricastin 1)

2017
- Commissioning of Romanche Gavet (hydro)

2018
- Adoption of a raison d'être registered in the by-laws

2019
- Commissioning of the 1st EPR, Taishan

2020
- Step up in offshore wind

2021
- Adoption of a raison d'être registered in the by-laws

Notes:
(1) Public Industrial and Commercial Establishment

Additional points:
- On 20 November 2004, EDF becomes a French commercial company (SA)
- Sale of 49.9% of RTE to Caisse des Dépôts and CNP Assurances and capital increase of approximately €4bn
- France multi-year energy programme (PPE): Project published (25 January 2019)
- Acquisition of 75.5% of Framatome capital
- Acquisition of 49.9% of RTE to Caisse des Dépôts and CNP Assurances and capital increase of approximately €4bn
- IPO in 2005 and creation of RTE to guarantee non-discriminatory access to the market
- Acquisition by EDF of Dalkia’s activities in France
- Launch of the commercial-scale nuclear program
- Development of the French industrial base, including hydroelectric and nuclear power plants
- Start of the international development, first in South America, then in Europe with the UK (from 1998 onwards), Germany (2001) and Italy (2005)

- Step up in offshore wind
- Commissioning of the 1st EPR, Taishan
EDF GROUP: ORGANISATIONAL CHART (1)

(1) Simplified organisational chart at 17/02/2022
(2) Shareholdings with significant minority interests
(3) See slide “Performance of EDF SA’s dedicated assets” on p.235
(4) Companies and shareholdings held at different levels by the EDF Renewables group
2030 - THREE STRATEGIC KEY PILLARS

To build a net zero energy future with electricity and innovative solutions and services, to help save the planet and drive wellbeing and economic development

A creator of services and solutions to support customers and regions in the shift towards carbon neutrality

As a key player in the decarbonisation of society, EDF creates value for its customers through the energy and innovative solutions it provides

> 15mtCO₂ avoided emissions (1)
€10bn revenue in services (2)
> 1.5 contract/customer (3)

A global leader in the generation of CO₂-neutral electricity

EDF builds and operates electricity generation facilities that decarbonise the electricity mix and invests in innovative and competitive technologies

Decrease of 50% of direct carbon emissions vs 2017
x2 renewables capacities incl. Hydraulic vs 2015 so 60 GW nets
Continuing the operation of France’s nuclear power plants beyond 40 years, by successfully completing the Grand Carénage
Initiating new EPR & 1 SMR

A key international player in the energy transition

EDF is deploying its expertise as a low-carbon energy company in new areas of growth and innovation, far from its historical borders

Exit coal
Triple the activity vs 2015 (4)
1.5 – 2GW nets hydro installed capacities (4)
↑ 1 million off-grid kits

---

(1) Customers, Services & Territories sector’s activities. EDF estimate, including CO2 savings linked mainly to heating and cooling networks, the development of the electric vehicle and energy saving certificates.
(2) Group
(3) EDF estimate on 4 priority countries in Europe called “G4” (France, Italy, UK and Belgium) (residential)
(4) Excluding “G4”, i.e. the 4 priority countries in Europe, called « G4 »
(5) Flamanville 3, Hinkley Point C and Taishan
CAP 2030 STRATEGY: 2021 SUCCESSES

A creator of services and solutions to support customers and territories shifting towards carbon neutrality

1.16 contracts/customer\(^{(1)}\)
(2030 target > 1.5 contract/customer\(^{(1)}\))
+20% Enedis connections vs 2019\(^{(2)}\)

Global leader in CO\(_2\)-neutral electricity generation

3.1 GW gross renewable capacities commissioned\(^{(3)}\)
(2030 target: x2 capacities incl. hydro vs 2015, i.e. 60GW net)
91% decarbonised\(^{(4)}\) generation
(o/w 93% in the European Union)

An international player in the energy transition

Achievements in the United Arab Emirates, in Cameroon and in Chile
(2030 target: Triple business activity vs 2015\(^{(5)}\))

3 strategic key pillars supported by an impulse of transformation, innovation, human ambition and by Corporate Social Responsibility commitments

---

(1) Scope of France commercial division (CST).
(2) EDF estimate for the 4 core countries called “G4” in Europe (France, Italy, UK, Belgium) for residential customers.
(3) Collective housing, comparison vs 2019. 2020 was an exceptional year because of COVID.
(4) Direct generation-related CO\(_2\) emissions, excluding life-cycle analysis (LCA) of fuel and production means.
(5) Electricity output of fully consolidated entities (excluding gas, coal and fuel oil).
(6) Outside the G4 countries, i.e. excluding the four core countries in Europe.
BUSINESS MODEL (1/2)

ASSETS AND RESOURCES - 2021

Customer proximity
- 32.5 million customers in electricity and 6.0 million customers in gas
- Leading brands: EDF, Edison, Luminus, Dalkia
- 74.3 million customer visits on digital consumption monitoring platforms

A human ambition
- 167,157 employees
- 79% of employees attended a skills development training during the year

An ambitious innovative ecosystem
- A new Innovation and Pulse Programmes department created in 2021
- Nearly 2,263 R&D employees
- R&D consolidated budget of €661m in 2021
- 756 patented innovations at end-2021 by the R&D (EDF & Enedis)

Major industrial assets
- 117.3GW of electricity generation capacity
- An integrated nuclear industry
- A portfolio of wind and solar projects of almost 76GW
- 1.4 million km of distribution network
- 34 million smart meters installed
- Over 330 heating and cooling networks operated by Dalkia

A strong CSR commitment
- No. 1 investor in the energy transition in Europe
- A rating Climate Change
- A1 SUSTAINABILITY
- €19bn of green & sustainable funding at end-2021

(1) Consolidated scope. Counted per site
(2) EDF SA scope excluding French overseas departments and Corsica
(3) Group scope
(4) FTEs (full-time equivalent) at Group level
(5) Consolidated data at Group scope
(6) Pipeline excluding capacities under construction. All the projects in prospectation phase included in the pipeline, starting 2030
(7) Enedis distribution network under concession

BUSINESS MODEL ...

« Raison d’être » of EDF: To build a net zero energy future with electricity and innovative solutions and services, to help save the planet and drive wellbeing and economic development

Three strategic axes for the decarbonisation of our companies in France, Europe and worldwide:

A creator of services and solutions to support customers and territories in the shift towards carbon neutrality
- >15MtCO₂ avoided emissions
- €10bn revenues in services
- >1.5 contract / customer

A global leader in the generation of CO₂-neutral electricity
- 50% CO₂eq direct emissions vs.2017
- 60GW nets vs.2015
- Initiating new EPRs & 1 SMR

An international key player in the energy transition
- Exit coal
- 1.5 – 2GW nets hydro installed capacities
- 1 million off grid kits

Supported by a drive for transformation, innovation, human ambition and Corporate Social Responsibility commitments, and the implementation of 4 plans:


CAP 2030
BUSINESS MODEL (2/2)

For the climate and the environment
• An ambition to contribute to carbon neutrality by 2050
• Electricity output of 523.7TWh, 91% decarbonised (1) with emissions of 48gCO²/kWh (2)
• EDF, a water sharing player: water intensity of 0.82/l/kWh (3)
• Commitment for biodiversity

For customers
• High customer satisfaction level
• More than 642,000 vulnerable customers received energy assistance (4)

For partners and territories
• SMEs account for between 22 and 26 % of EDF and Enedis procurements
• 1 EDF SA direct job generates 4.4 jobs on the national territory (5)
• 100% of projects are subject to consultation (6)

For employees
• An employee engagement index of 69% (7)
• Women represent 29.8% in Management Committees (8)
• An average salary equity (9) of 6.6

Value Creation - 2021

Sales: €84.5bn
EBITDA: €18.0bn
Net income excl. Non-recurring items: €4.7bn

Sharing added value with our stakeholders

Suppliers
Purchases (10)
€52.9bn
EDF group Global CSR Agreement

States and territories
Taxes (11)
€4.7bn

Employees
Remuneration (12)
€14.5bn

Shareholder dividends
Target distribution rate (13)
45%-50%

Notes:
(1) Direct output-related CO₂ emissions, excluding life-cycle analysis (LCA) of fuel and generation means.
(2) CO₂ emissions due to heat and electricity generation. Group scope.
(4) Scope EDF SA.
(5) Goodwill study based on the 2020 consolidated figures.
(6) More than €50m projects, in accordance with the Equator Principles – scope Group.
(7) MyEDF Group internal survey.
(8) Scope Group.
(9) EDF SA perimeter - ratio established in accordance with the guidelines published by AFEP.
(10) Consolidated purchases and other external expenses.
(11) Consolidated taxes, including income taxes.
(12) Consolidated personnel expenses.
(13) Rate applied to 2021 net income excluding non-recurring items adjusted or the remuneration of hybrid bonds accounted for in equity.

The breakdown of CSR issues into 16 commitments

Ambitious carbon trajectory
Carbon offsetting solutions
Adapting to climate change
Development of electricity uses and energy services

Health and safety for all
Ethics and human rights
Equality, diversity and inclusion
Energy poverty and social innovation

Biodiversity
Responsible land management
Integrated and sustainable water management
Waste and circular economy

Dialogue and consultation with stakeholders
Responsible regional development
Development of industrial sectors
Sustainable digital development
EDF HYDROGEN PLAN

ACHIEVEMENTS AND PROJECTS

A dedicated subsidiary and expertise within the Group
- Hynamics, a wholly-owned subsidiary of the EDF group dedicated to hydrogen since 2019
- Long-standing expertise provided by Eifer (3) and R&D, including an electrolyser test platform at the EDF Lab Les Renardières site
- A stake in the McPhy French electrolyser manufacturer since 2018 (14.1% to date)

First facility commissioned in 2021 & projects
- Commissioning by Hynamics of the largest French electrolytic hydrogen production and distribution site in Auxerre (1MW). About 15 other territorial mobility projects under development

Major projects for the industry under development and which will benefit from public support (within the framework of the IPCEI or the LDAE(4))
- The Hynovi project (330 MW of electrolysis) in partnership with the cement manufacturer Vicat in France to produce e-methanol,
- Also in France, the ABC Ottmarsheim project with Boréal to decarbonise ammonia production and the HYDOM project with Domo Chemicals
- In Germany, notably the Westküste project (30 MW), which will continue with the Hyscale project (500 MW in phase 1)

In total, a portfolio of some 60 projects representing 1GW of electrolysis worldwide
- Several projects in Italy (Brindisi, Porto Marghera, Dalmine...), in the United Kingdom (Teesside, Sizewell...) and in Belgium
- Ambitious projects combining hydrogen and renewables in other regions of the world, including the Middle East, North America and Latin America

TARGETS (1)

3GW gross of low-carbon electrolytic hydrogen projects developed by 2030 worldwide (1)

A European leader of 100% low-carbon hydrogen generation in 2030 (2)

from low-carbon network electricity, renewable energy or nuclear power

Main markets addressed: Industry and transport (in territorial mobility and e-fuels for maritime and air transport)

(1) Subject to the implementation of appropriate support policies and a favourable regulatory framework for the development of electrolytic hydrogen
(2) In line with the maximum emissions threshold defined in the European taxonomy, as part of its Hydrogen Plan, EDF is committed to ensuring that all its hydrogen production projects are below this threshold of 3kgCO₂eq/kgH₂
(3) Eifer, joint research centre of EDF and the Karlsruher Institut für Technologie (KIT) in Germany
(4) IPCEI : Important Project of Common European Interest ; LDAE : Lignes Directrices Aides d’Etat (State Aid Guidelines)
EDF ELECTRIC MOBILITY PLAN (1)

TARGET

30% MARKET SHARE IN THE ELECTRICITY SUPPLY FOR ELECTRIC VEHICLE OWNERS IN 2023
In the Group’s four main markets (G4): France, UK, Italy and Belgium

400,000
Charging stations rolled out by 2023
Upgrade of +250,000 vs 2020 objectives

20,000
Smart charging stations operated by 2023
Upgrade of +10,000 vs 2020 objectives

ACHIEVEMENTS AND PROJECTS

Support to EDF’s customers and European partners in their shift towards e-mobility:

IZIVIA: 500 charging stations already installed in the Lyon metropolitan area

More than 200,000 charging stations installed and operated in the Group at end-2021

IZIVIA, the leader in the operation of public charging points: 19.5% of this segment (charging points located in private car parks or in the street)

Pod Point:
• around 70,000 charging stations rolled out in the UK in 2021
• secured growth financing through a fund raising (minority IPO)

30% MARKET SHARE IN THE ELECTRICITY SUPPLY FOR ELECTRIC VEHICLE OWNERS IN 2023
In the Group’s four main markets (G4): France, UK, Italy and Belgium

400,000
Charging stations rolled out by 2023
Upgrade of +250,000 vs 2020 objectives

20,000
Smart charging stations operated by 2023
Upgrade of +10,000 vs 2020 objectives

(1) The EDF Electric Mobility Plan supplements specific investments made in this field by Enedis, an independent subsidiary of EDF according to the French Energy Code

RIGE project (smart charging in the Grand Est region) on the installation of 500 V1G and V2G stations for companies and local authorities.

V2G: DREEV certification for RTE to supply remunerated system services to the network via electric vehicles

EVVE: Certification by the European Commission of the DREEV and EDF project among the winners of the Innovation Fund’s call for small-scale projects. The subsidy will be used to install 800 V2G stations by end-2024.

“EV100” project in line with the objective
17.3% of the EDF group vehicle fleet electrified at end-2021, versus a target of 100% in 2030
THE FRENCH SOLAR PLAN

EDF’S DEVELOPMENT IN SOLAR PV IN FRANCE CONTINUES TO ACCELERATE

ACHIEVEMENTS AND PROJECTS

**c. 5.5GW** (2)
- of grounded-based projects in development at end-2021

**c. 330MW**
- of secured projects at end-2021

**c. 350MW**
- under construction at end-2021

**196 MW awarded**
- at CRE tender 4.9 and 4.10:

**Acquisition of 45% stakes**
- in Green Lighthouse Development, French solar project developer, established in Nouvelle-Aquitaine

TARGET

BE A LEADER IN FRANCE

30% MARKET SHARE (1) BY 2035

---

(1) Market share expressed as installed gross capacities
(2) Including Green Lighthouse Development pipeline acquired in 2021
THE ELECTRICITY STORAGE PLAN

TARGET

DEVELOP 10GW IN NEW STORAGE SITES WORLDWIDE BY 2035, IN ADDITION TO THE 5GW OPERATED TODAY

A PORTFOLIO OF COMPLETED OR SECURED PROJECTS HAVING INCREASED TO A TOTAL OF 1.1GW AT END-DECEMBER 2021

The results in 2021 benefited from the contribution of major large-scale projects:

- Signature of the Desert Quartzite PPA (California): storage system (150MW/600MWh) coupled with a 300MW solar power plant
- Launch of 2 new projects by Pivot Power (UK): 2 storage systems of 50MW/100MWh directly connected to the transport network (Coventry and Midlands projects)
- Winner of the "risk mitigation" tender in South Africa for electricity supply: storage systems (75MW) coupled to wind and solar projects allowing to supply a dispatchable power
- Signature of a ENR PPA with the city of Iquitos (Peru, 500,000 habitants, world biggest city not interconnected): 100MW PV + 100MW storage

Projects progressively commissioned in 2021:

+145MW of capacities commissioned in 2021 in France (Guadeloupe, Martinique), in the USA (Maverick 2), in the UK (Pivot Power: Cowley 50MW and Kemsley 50MW) and in Germany (installation of a 1.6MWh storage system at the customer Speira Hamburg)

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(1) The EDF group’s business development model is based on partnerships. Not all of these projects will necessarily be fully consolidated
(2) Principally PSHP (Pumped-Storage Hydropower Plants)
In 2021, EDF Group and the industry implemented 25 commitments, structured in 5 axes:

- **MANUFACTURING & ASSEMBLY**: guaranteed right 1st time
- **SKILLS**: building in the sector
- **SUPPLY CHAIN**: partnership, results-based relationship with suppliers
- **GOVERNANCE**: State of the art project
- **STANDARDIZATION**: Quality and safety enhanced by replication

**THE EXCELL PLAN**
Aiming for excellence in the French nuclear industry

Announced at the end of 2019 and launched in May 2020, excell plan aims to enable the French nuclear industry to regain the highest level of rigour, quality and excellence in order to meet the needs of existing and future major nuclear projects.

**ACHIEVEMENTS 2021**

- **Governance of new nuclear projects strengthened** by the introduction of « Contrôle des Grands Projets » (CGP, December 2020): each project undertaken is subject to a quarterly review based on a standard milestone.
- **Creation in April 2021 of « Université des Métiers du Nucléaire » (UMN) to boost training offers.**
- **Creation of the Cotentin-Normandy High School for Welding Training (Hefaïs), in partnership with Orano, Naval Group and CMN (Constructions Mécaniques de Normandie).**
- **Definition in close collaboration with industry of 12 standards to produce compliant products « right first time » and to establish a collaborative and balanced relationship between EDF and its suppliers.**
- **44 companies are implementing "excell in quality" plans**

Excell plan is now entering its third phase: consolidating the results achieved and making the actions undertaken sustainable in order to reach the best industrial standards.
THE EDF GROUP

➢ GROUP STRATEGY  P. 6

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1 RAISON D’ÊTRE, 4 PILLARS, 16 CSR COMMITMENTS

To build a net zero energy future with electricity and innovative solutions and services, to help save the planet and drive wellbeing and economic development.

CARBON NEUTRALITY & CLIMATE
- Ambitious carbon trajectory
- Carbon offset solutions
- Adapting to climate change
- Developing electricity use and energy services

WELLBEING & SOLIDARITY
- Health and safety for all
- Ethics, compliance and human rights
- Equality, diversity and inclusion
- Energy precariousness and social innovation

PLANET’S RESOURCES PRESERVATION
- Biodiversity
- Responsible land management
- Integrated and sustainable water management
- Waste and circular economy

RESPONSIBLE DEVELOPMENT
- Dialogue and consultation with stakeholders
- Responsible regional development
- Development of industrial sectors
- Sustainable and inclusive digitalisation

(1) EDF’s Raison d’être, approved by the Shareholders’ Meeting of 07/05/2020.
(2) Priority SDG’s as defined in WBCSD public report: An SDD Roadmap for Electric Utilities”.
# 16 KPIs FOR MEASURING THE 16 CSR COMMITMENTS

<table>
<thead>
<tr>
<th>CSR COMMITMENTS</th>
<th>KEY PERFORMANCE INDICATORS</th>
<th>TARGETS</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>DEADLINE</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambitious carbon trajectory</td>
<td>Carbon intensity: specific CO₂ emissions from electrical generation and heat</td>
<td>35gCO₂/kWh</td>
<td>55</td>
<td>51</td>
<td>48</td>
<td>2030</td>
<td>Group</td>
</tr>
<tr>
<td>Carbon offset solutions</td>
<td>Deployment rate of the framework guidelines on carbon offset solutions</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>2023</td>
<td>Group</td>
</tr>
<tr>
<td>Adapting to climate change</td>
<td>Deployment rate of new climate change adaptation plans within concerned entities</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>47</td>
<td>2022</td>
<td>Group</td>
</tr>
<tr>
<td>Development of electricity and energy services</td>
<td>Avoided CO₂ emissions thanks to our sales of innovative goods and services</td>
<td>&gt;15Mt</td>
<td>-</td>
<td>-</td>
<td>4.4</td>
<td>2030</td>
<td>EDF &amp; Dalkia</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Achievement rate of &quot;Act4nature international&quot; commitments</td>
<td>100%</td>
<td>-</td>
<td>44</td>
<td>67</td>
<td>2022</td>
<td>Group</td>
</tr>
<tr>
<td>Responsible land management</td>
<td>Implementation rate of innovative solutions encouraging multifunctional land use</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>2026</td>
<td>Group</td>
</tr>
<tr>
<td>Integrated and sustainable water management</td>
<td>Water intensity: water consumed / electricity generated by fleet</td>
<td>&lt;0.95l/kWh</td>
<td>0.87</td>
<td>0.87</td>
<td>0.86</td>
<td>Annual</td>
<td>Group</td>
</tr>
<tr>
<td>Waste and circular economy</td>
<td>Annual rate of conventional waste directed towards a waste recovery industry</td>
<td>&gt;80%</td>
<td>92.4</td>
<td>91.9</td>
<td>92.7</td>
<td>Annual</td>
<td>Group</td>
</tr>
<tr>
<td>Health and safety for all</td>
<td>Global LTIR</td>
<td>&lt;1.8Ind</td>
<td>2.4</td>
<td>1.9</td>
<td>2.1</td>
<td>2023</td>
<td>Group</td>
</tr>
<tr>
<td>Ethics, compliance and human rights</td>
<td>Proportion of executives who have completed the anti-corruption training programme</td>
<td>100%</td>
<td>61.8</td>
<td>62.5</td>
<td>71.8</td>
<td>2021</td>
<td>Group</td>
</tr>
<tr>
<td>Equality, diversity and inclusion</td>
<td>Gender balance index: percentage of women in the Management Committee of the Group's entities</td>
<td>33%</td>
<td>27.3</td>
<td>28.7</td>
<td>29.8</td>
<td>2026</td>
<td>Group</td>
</tr>
<tr>
<td>Energy poverty and social innovation</td>
<td>Individual guidance provided every year to our clients as part of the &quot;Energy Support&quot; framework</td>
<td>600,000 – 1,000,000</td>
<td>894,260</td>
<td>905,017</td>
<td>642,482</td>
<td>Annual</td>
<td>EDF</td>
</tr>
<tr>
<td>Dialogue and consultation with stakeholders</td>
<td>Annual rate of projects for which a dialogue and consultation procedure is engaged (1)</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>Annual</td>
<td>Group</td>
</tr>
<tr>
<td>Responsible regional development</td>
<td>Annual rate of procurement from SMEs in France</td>
<td>22% to 26%</td>
<td>22.5</td>
<td>23.4</td>
<td>24.9</td>
<td>Annual</td>
<td>EDF &amp; Enedis</td>
</tr>
<tr>
<td>Development of industrial sectors</td>
<td>Achievement rate of supporting actions backed by EDF, encouraging relocation and maintaining nuclear industry skills (&quot;France Relance&quot; Programme)</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>28.6</td>
<td>2023</td>
<td>EDF</td>
</tr>
<tr>
<td>Sustainable and inclusive digitalization</td>
<td>Achievement rate of EDF’s commitment to the French Responsible Digitalization Institute (INR)</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>18.8</td>
<td>2024</td>
<td>EDF</td>
</tr>
</tbody>
</table>

(1) New calculation methodology
In italic: new KPIs for the new commitments
EDF, A COMPANY COMMITTED TO PROTECTING THE CLIMATE

Ever since the Paris Agreement, EDF has been constantly strengthening its actions and responsibility on climate issues. The Group is committed to reducing its direct and indirect emissions, fostering its climate governance and maintaining its CDP Climate leader position.

OUR CARBON NEUTRALITY PATHWAY

(1) Vs 2017
(2) Vs 2019
(3) Meaning : bring direct emissions close to zero (Scope 1), reduce indirect emissions as much as possible (Scope 3), compensate residual emissions through negative-emission projects (3 scopes)
(4) https://www.transitionpathwayinitiative.org/companies/edf
ENVIRONMENTAL & SOCIAL ACHIEVEMENTS AND TARGETS

CARBON INTENSITY

STEADILY DECLINING AND AROUND 5x LOWER THAN THE EUROPEAN AVERAGE

2019 2020 2021 2030 2050
55 51 48 35 0

(1) 2020 carbon intensity average of power producers in Europe according to the European Environment Agency (EEA).

CARBON TRAJECTORY

2023 TARGET ACHIEVED TWO YEARS IN ADVANCE

Scope 1 trajectory

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2023</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂eq</td>
<td>33</td>
<td>28</td>
<td>27</td>
<td><strong>28-30</strong></td>
<td>25</td>
</tr>
</tbody>
</table>

Targets under review

NB: Carbon intensity corresponds to the CSR commitment KPI which assesses the “ambitious carbon trajectory”.
The gender equality index is assessed using the KPI to measure EDF’s CSR commitment to Equality, Diversity and Inclusion. These two KPIs are verified by an independent third-party organisation in 2021.
CLIMATE REPORTING IN ACCORDANCE WITH TCFD GUIDELINES

The EDF Group was one of the first companies in the world to commit to supporting the TCFD\(^{(1)}\) initiative in 2017 and to report publicly, from 2018, on the impact of climate change on its organisation according to the 4 fundamentals of TCFD and identified in its Statement on Non-Financial Performance since 2018.

REPORTING 2021

1. STRENGTHENING OF CLIMATE GOVERNANCE
   - The « climate » criterion, based on carbon intensity, was extended to the variable remuneration of all directors in the Group
   - A « Climate Fresk » sequence was organised with the members of the Board

2. CARBON PRICES FOR GUIDING INVESTMENTS
   In line with the 2021 CDP, the carbon price range currently used by EDF for its scenarios is 47 to 150 €/t CO\(_2\) by 2040, with a median price of 87 €/t CO\(_2\).

3. RISK MANAGEMENT
   Validation by the Executive Committee and operational deployment of new adaptation plans to the physical risks of climate change, in all concerned entities

4. AN AMBITIOUS CARBON INTENSITY TRAJECTORY \(^{(3)}\)

---

\(^{(1)}\) The Task Force on Climate Change Disclosure (TCFD), set up by the Financial Stability Board (FSB), made specific recommendations between 2015 and 2017 on the climate reporting elements expected in companies’ universal registration documents.


\(^{(3)}\) See p. 23 Environmental & social Achievements and targets, carbon intensity category.
In 2021, EDF joined the TNFD Forum, aiming at showing its support of the work done by the Taskforce, offering its operational experience and Group skills, and taking part of new projects.

Based on the TCFD model, the TNFD sets an ambitious ambition: setting up a reporting system allowing financial institutions and companies to integrate risks and opportunities linked to nature in their strategic planning decisions and to identify performance indicators.

GENDER EQUALITY AMBITION

After achieving its 2020 objectives 2 years before the target-year, EDF has set itself more ambitious targets in 2021, applied to all hierarchical levels.

<table>
<thead>
<tr>
<th>% Group female employment</th>
<th>2021</th>
<th>2026 target</th>
<th>2030 ambition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employees</td>
<td>25,9</td>
<td>33</td>
<td>36-40</td>
</tr>
<tr>
<td>Managers</td>
<td>28,9</td>
<td>33</td>
<td>36-40</td>
</tr>
<tr>
<td>Members of Management Committees</td>
<td>29,8</td>
<td>33</td>
<td>36-40</td>
</tr>
</tbody>
</table>
SUSTAINABLE FINANCING & DECARBONISED GENERATION

SUSTAINABLE FINANCING

ISSUE OF A €1.85bn GREEN BOND

ISSUE OF A €1.25bn SOCIAL HYBRID BOND\(^{(1)}\)
First benchmark issue of its kind in the sector

72% OF CREDIT LINES INDEXED ON ESG KPIs
i.e. a total of €9.3bn\(^{(2)}\)

(1) Funds dedicated to the financing of eligible projects corresponding to investment expenditures with SMEs.
(2) Over a total of €13bn at 31/12/2021.

DECARBONISED GENERATION

91% DECARBONISED\(^{(1)}\) GENERATION\(^{(2)}\)
IN THE WORLD
(o/w 93% in the European Union)

(1) Direct output-related CO\(_2\) emissions, excluding life-cycle analysis (LCA) of fuel and production means.
(2) Electricity production of fully consolidated entities.
MODALITIES FOR INCLUSION OF NUCLEAR POWER IN EUROPEAN TAXONOMY

EUROPEAN LEGAL PROCESS

- **1st delegated act** adopted by the Commission in June 2021 (1) to define activities providing a substantial contribution to climate goals

- **Complementary delegated act** published on 2 February 2022, including nuclear and gas as transition activities (2)

- **Delegated act on reporting** effective from 1 January 2022: disclosure of eligible activities share on 3 indicators Revenue, Opex, Capex as defined by the Taxonomy

(1) Delegated act published on 10 December 2021 in the Official Journal of the European Union

(2) Following a review period by the the French Parliament and Council of up to 6 months, the delegated act will be adopted in the absence of a veto for entry into force on 01/01/2023

MODALITIES FOR INCLUSION OF NUCLEAR POWER IN EUROPEAN TAXONOMY (1)

- Construction and operation of **new reactors** with innovative technology (construction permit obtained before 2045)

- **Modifications aimed at extending the lifetime** of plants authorised before 2040

- **R&D activities**, demonstration and implementation of innovative reactors

*For nuclear projects located in the EU.*

Compliant with “Do not significantly harm” criteria on the management of fuel, waste and security.

(1) According to the complementary delegated act adopted on 02/02/2022 and applicable from 01/01/2023
NON-FINANCIAL RATINGS

MAINTENANCE IN THE MAJOR NON-FINANCIAL INDEXES:
(Non-exhaustive list)

Sector average
Change vs. 2020 if ± 3 bps

Climate Change
Water Security

ESG score
ESG Risk Rating

Negligible risk
Severe risk

Top 1.5%
Top 33%
Top 6%
Top 8%
Top 1%

A
A-
B-
B

Top 1%

Non-ESG

Others

• Climate Change
• ESG Screened
• ESG Universal
• World Climate Change
• Climate Paris Aligned
• EU Low Carbon Leaders

• CAC40 ESG
• Vigeo World 120
• Eurozone 120
• Vigeo France 20
• STOXX Global ESG Leaders
• FTSE4Good

MAIN INTERNATIONAL COALITIONS OF EDF
2021 CSR KEY MILESTONES & AWARDS

Impact report

July, EDF published « Impact 2021 », a non-financial reporting that measures the externalities of EDF’s activities and their contributions to the 9 most material SDGs for utilities.

Just Transition ranking

October, EDF is ranked first among 50 other utilities on social criteria and ranked second on criteria linked to just transition by the World Benchmarking Alliance.

Just Transition report

Ahead of the COP26, EDF publishes in November its Just Transition principles, « From strategy to actions ».

COP 26

At COP26 in November, EDF presents its views on nuclear energy to achieve carbon neutrality, employee involvement in the fight against climate change, the role of electricity to decarbonize the building and transport sectors.

C&B Trophy « sustainable employee savings plan »

EDF is awarded the C&B «Sustainable Employee Savings Plan» trophy, issued by the club, for its EDF solidary and low carbon» fund, which is fully included in our targets to fight against climate change and to promote a just transition, as planned in the Paris Agreement.

Carbon footprint prize

EDF is chosen by Boursorama and 18- to 29-year-old shareholders for having the best plan to reduce its carbon footprint.

Impact award

EDF is awarded the Impact Award by Option Finance for the first hybrid social bonds ever issued.

Students’ and young graduates’ favorite company

EDF is twice in a row nominated as the students’ and young graduates’ favorite company in the utilities sector, according to EPOKA’s barometer and Harris Interactive.
EDF'S GREEN BOND FRAMEWORK FOLLOWS BEST MARKET PRACTICES AND GREEN BOND PRINCIPLES (GBP)

First company to issue a Green Bond in 2013
Active member of the GBP governance
Co-founder of the Corporate Forum on Sustainable Finance
2 updates of the Green Bond Framework in order to contribute to better market practices

1 - USE OF FUNDS

— Development of new renewable generation capacities
— Renovation and modernisation of existing hydroelectric assets with the aim of improving their efficiency, flexibility and ability to contribute to meeting the needs of electricity systems (that evolve as the share of intermittent means of generation increases in the energy mix) and adapting the existing hydropower assets to climate changes
— Energy efficiency solutions to enable all EDF customers to make better use of energy, mainly through its subsidiary Dalkia
— Biodiversity, to enable EDF to continue to pursue its goal of having a positive impact on biodiversity, from simple prevention measures to measurable improvements

2 - PROJECT SELECTION PROCESS

— A internal organisation dedicated to evaluating and ensuring that only Eligible Projects as defined in the Use of Funds section are eligible to receive Green Bond financing
— Respect of specific environmental and social criteria
— Investments may include:
  ▪ tangible or intangible assets
  ▪ Investments (including acquisitions mainly related to new developments / technologies)
  ▪ some operating expenditures such as R&D and investments in the maintenance of green assets

3 - FUND MANAGEMENT

— Funds are managed and monitored separately until they are allocated to eligible projects
— They are invested in Socially Responsible Investments funds until their allocation

4 – REPORTING

— At half-yearly intervals: allocation of funds
— Annually: allocation of funds + list of projects financed by the Green Bond and aggregated impacts (at the level of each green issue)

5 – EXTERNAL REVIEW

— External ex-ante opinion: “reasonable” level of assurance delivered by Vigeo Eiris on EDF’s Green Bond Framework (their highest level),
— Ex-post certification: annual report issued by an external auditor, Deloitte on the allocation of funds and the compliance of Green Bond issues with the Green Bond Framework and the GBP, and the conformity of the CO₂ emissions determination modality
**GREEN BONDS: FUNDS ALLOCATION AND CO₂ EMISSIONS AVOIDED**

<table>
<thead>
<tr>
<th>Issue date</th>
<th>Funds raised</th>
<th>Funds allocated</th>
<th>Projects financed by the Green Bond</th>
<th>Share of the total investments financed by the Green Bond</th>
<th>Total net (1) capacity of the projects financed (in MW)</th>
<th>Expected net (1) CO₂ emissions avoided (in Mt/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 2013</td>
<td>1.4Md€</td>
<td>1.4Md€</td>
<td>EDF Renewables projects</td>
<td>59%</td>
<td>976</td>
<td>1.55</td>
</tr>
<tr>
<td>Oct. 2015</td>
<td>1.25Md$</td>
<td>1.25Md$</td>
<td>EDF Renewables projects</td>
<td>58%</td>
<td>815</td>
<td>1.83</td>
</tr>
<tr>
<td>Oct. 2016</td>
<td>1.75Md€</td>
<td>1,248M€</td>
<td>EDF Renewables projects</td>
<td>54%</td>
<td>962</td>
<td>1.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td>502M€</td>
<td>EDF Hydro operations</td>
<td>100% (2)</td>
<td>903</td>
<td>0.01</td>
</tr>
<tr>
<td>Jan. 2017</td>
<td>26,000MY</td>
<td>14,021MY</td>
<td>wind projects (EDF Renewables, Luminus)</td>
<td>15%</td>
<td>86</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11,979MY</td>
<td>EDF Hydro operations + hydro Luminus project</td>
<td>87%</td>
<td>133</td>
<td>0.01</td>
</tr>
<tr>
<td>Sept. 2020</td>
<td>2.4Md€</td>
<td>2,246M€</td>
<td>projects + portfolio purchases by EDF Renewables, EDF ENR projects, Luminus projects</td>
<td>77%</td>
<td>1,421</td>
<td>1.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>138M€</td>
<td>EDF Hydro operations and biodiversity projects</td>
<td>100%</td>
<td>123</td>
<td>0.001</td>
</tr>
<tr>
<td>Nov. 2021</td>
<td>1.85Md€</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,410</strong></td>
<td></td>
<td><strong>6.48</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The detailed list of EDF Renewables projects and hydraulic investment operations by category is published in the 2021 EDF URD document. Situation at end-2021

(1) Sum of the impacts of each project weighted by the share of total investment funded by the corresponding Green Bond

(2) Share of investments funded by EDF taken in full, including half of Romanche-Gavet investment amount
EDF’S SOCIAL BOND FRAMEWORK FOLLOWS BEST MARKET PRACTICES AND SOCIAL BOND PRINCIPLES (SBP)

1 - USE OF PROCEEDS

- Eligible Projects include any capital expenditure contracted with a SME\(^{(1)}\) which contributes to the development or maintenance of EDF group’s power generation and/or distribution assets in Europe (defined as the European Union and the United Kingdom)
- The social objective of such projects is to support the SMEs that make up a key part of EDF’s industrial fabric and which provide employment opportunities in the territories where EDF is active
- Target population: employees and subcontractors of SMEs
- No double counting: EDF will not finance projects already financed by any of its green bonds

2 - PROJECT SELECTION & EVALUATION PROCESS

Eligible Projects are subject to a specific assessment and selection process:
- Under the coordination of EDF Group’s Finance Division, each Finance Department within a relevant EDF Division or subsidiary is responsible for identifying proposed Eligible Projects that comply with the Use of Proceeds criteria
- Each EDF division or subsidiary commits to respect the policies and procedures of the EDF Group, including those related to ethical procurement and contracting with SMEs
- Each relevant EDF Finance department will document the project assessment process within their scope

3 - FUND MANAGEMENT

- Net proceeds are managed through a dedicated process that ensures traceability until their allocation to Eligible Projects
- Until full allocation, the balance of the unallocated net proceeds will be invested in short-term financial assets, labelled as “Socially Responsible Investments”, as certified by French Ministry of Finance’s Label ISR

4 – REPORTING

- For each Social Bond issuance, EDF will report annually on the allocation and impact of the proceeds, until full allocation or the maturity date of the relevant bond, whichever comes first
- An independent auditor will be appointed to issue an annual assurance report on fund allocations, compliance with the SBP and compliance of the methods used by EDF to estimate the social impact with the methodology described in the Framework

5 – EXTERNAL REVIEW

- External ex-ante opinion: “reasonable” level of assurance delivered by S&P Global Rating on EDF’s Social Bond Framework
- Ex-post certification: annual report issued by an external auditor, KPMG, on the allocation funds and the compliance with Social Bond Framework and the SBP, and the conformity of the social impacts of financed projects at the portfolio level

\(^{(1)}\) SMEs are identified based on INSEE (French National Institute of Statistics & Economic Studies) categories, stipulating that an SME (Small- and Medium-Sized Enterprise) has fewer than 250 staff and annual turnover not exceeding €50 million. Suppliers are ranked in the SME category by a service provider that EDF tasks with analysing the supplier list, checking that these SMEs are not controlled above 25% by a Large Enterprise or by an MMC.
EDF is committed to the Social Bonds Principles recommendation to “seek to achieve positive social outcomes especially but not exclusively for a target population(s)”.

EDF shall allocate proceeds from its May 2021 Social Bond issuance only to CAPEX spent with SMEs located in zones with high unemployment challenges, i.e., SMEs located in employment zones where the unemployment rate:

- is higher than the average national unemployment rate; or
- decreases less rapidly (or increases more rapidly) than the average national unemployment rate over the last five years.

Impact reporting: calculation of full-time employees per SME

\[
\text{Number of SMEs employees required to perform their contract with EDF} = \frac{\text{Total amount of production for each activity sector (in EUR)}}{\text{Amount of CAPEX contracted by each SME}} \times \frac{\text{Number of jobs per activity sector}}{\text{Ratio per sector}}
\]

Key results: preview

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount spent (1)</th>
<th>Number of SMEs</th>
<th>Number of employees required (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>€550 million</td>
<td>1,324</td>
<td>3,330</td>
</tr>
<tr>
<td>2020</td>
<td>€589 million</td>
<td>1,411</td>
<td>3,531</td>
</tr>
<tr>
<td>2021 (3)</td>
<td>€111 million</td>
<td>690</td>
<td>653</td>
</tr>
</tbody>
</table>

(1) Amount spent in France by France – generation and supply and France – regulated activities
(2) Number of employees required to perform their contract with EDF calculated through the ratio number of employees / amount of production by activity
(3) Funds only spent at Q1
THE EDF GROUP

➢ GROUP STRATEGY P. 6
➢ CORPORATE RESPONSIBILITY – CSR P. 19
➢ HIGHLIGHTS P. 34
➢ INNOVATION & TRANSFORMATION P. 45
➢ GOVERNANCE P. 51
NUCLEAR POWER: MAJOR CONTRIBUTION TO DECARBONISED GENERATION

ANNOUNCEMENTS BY THE FRENCH PRESIDENT TO SUPPORT THE NUCLEAR SECTOR

- Launch of a construction program of 6 EPR2 reactors with potentially 8 more
- Extended operations for all reactors except for safety issues
- Launch of French SMRs including €500m for NUWARD™

NEW NUCLEAR MAJOR PROJECTS

FLAMANVILLE 3

- Update of fuel loading target from end-2022 to Q2 2023 and construction costs from €12.4bn to €12.7bn(1)

SIZEWELL C

- Draft law introduced by the UK government on a funding scheme (Regulated Asset Base) of new nuclear projects

EXISTING NUCLEAR

FRANCE

- Generation (in TWh) 2020: 335.4, 2021: 360.7

“Grand Carénage”: Five 4th 10-year inspections completed, 2 under way

- Signature of an exclusive agreement to acquire part of the GE Steam Power’s nuclear activities(2)

- Extension of 1,300MW nuclear fleet depreciation period to 50 years

UNITED KINGDOM

- Generation (in TWh) 2020: 45.7, 2021: 41.7

- Closure of Dungeness B and Hunterston B power plants(3)

NUCLEAR POWER INCLUDED IN EUROPEAN TAXONOMY(4)

(2) See 10 February 2022 press release. Excluding the American continent.
(3) Closures in June 2021 and January 2022, respectively. Decision to close Hinkley Point B in mid-2022.
(4) Complementary delegated act of 02/02/2022 subject to definitive adoption in 2022.
RENEWABLES: CONFIRMATION OF GROWTH TREND

**STRONG GROWTH IN PROJECT PIPELINE...**

To 76GW gross, +27% vs end-2020

- Secured*
- Under development*
- Prospection phase*

Highlight: winner of a 1.5GW offshore wind farm in the USA

**AND STRONG GROWTH IN NET INSTALLED CAPACITY**

Installed capacity (1) (net GW)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity (net GW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>6.8</td>
</tr>
<tr>
<td>2020</td>
<td>10.6 +13%</td>
</tr>
<tr>
<td>2021</td>
<td>12.0</td>
</tr>
</tbody>
</table>

(2) CAGR: Compound annual growth rate.

---

(1) Wind and solar. See Book supplementing the presentation, p.31 and following.
CUSTOMERS: COMMERCIAL OFFERS WELL POSITIONED

CONSOLIDATION OF CUSTOMER PORTFOLIO WORLDWIDE (1)

<table>
<thead>
<tr>
<th>Year</th>
<th>France</th>
<th>UK</th>
<th>RoW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>30.0</td>
<td>4.8</td>
<td>37.9</td>
</tr>
<tr>
<td>2021</td>
<td>29.3</td>
<td>5.5</td>
<td>38.5</td>
</tr>
</tbody>
</table>

France: stabilisation in customer numbers at year-end

GOOD PERFORMANCE ON OFFERS

- Market offers among the best positioned in Q4 2021(2)
- Customers in market offers(3) (in millions)
  - 0.2 2019
  - 1 2020
  - 1.4 2021
  - 3 2023
- Increase in number of contracts/customer(6) for services, gas and electricity: 1.16 contract/customer end-2021 (2030 target > 1.5)

STRONG GROWTH IN DECARBONISED OFFERS

ELECTRIC MOBILITY

Close to 200,000 Group charging points installed and managed at end-December 2021

Pod Point, leader in residential charging in the UK

Izivia, leader in on-street charging in France

SERVICES

Dalkia Electrotechnics/Citelum: winner of a 10-year public street lighting contract for the city of Paris

Dalkia: contracts won in operations & maintenance heating and cooling networks (biomass and biogas) in France

(1) Millions of residential and professional (electricity and gas) customers, calculated by delivery point. A customer may have two delivery points. For France: DCO, ÉS and SEI.
(2) Electricity and gas market offers in terms of price for residential customers in France.
(3) Residential electricity customers in France.
(4) EDF estimate: France, UK, Italy and Belgium (residential).
ENEDIS: THE WORLD’S SMARTEST POWER GRID (1) CONTRIBUTING TO THE TERRITORIES’ ECOLOGICAL TRANSITION

---

**LINKY SMART METERS: SUCCESSFUL ROLL-OUT**

Target met on meters rolled out by 31/12/2021 in France:

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions of meters rolled out</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>23</td>
</tr>
<tr>
<td>2020</td>
<td>30</td>
</tr>
<tr>
<td>2021</td>
<td>34</td>
</tr>
</tbody>
</table>

Industrial success in terms of time and performance with final project costs lower than the initial budget.

Linky remuneration(2): additional 3% bonus expected.

---

**THE SMARTEST GRID IN THE WORLD**

Enedis ranks No.1 in Singapore Smart Grid Index(1) out of 80 operators worldwide.

---

**FIRST-RATE OPERATIONAL PERFORMANCE**

High-performance supply quality (SAIDI)(3):

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>82</td>
</tr>
<tr>
<td>2014</td>
<td>64</td>
</tr>
<tr>
<td>2015</td>
<td>61</td>
</tr>
<tr>
<td>2016</td>
<td>64</td>
</tr>
<tr>
<td>2017</td>
<td>64</td>
</tr>
<tr>
<td>2018</td>
<td>64</td>
</tr>
<tr>
<td>2019</td>
<td>58</td>
</tr>
<tr>
<td>2020</td>
<td>56</td>
</tr>
<tr>
<td>2021</td>
<td></td>
</tr>
</tbody>
</table>

---

**STRONG GROWTH IN CONNECTIONS**

Connection volumes up 20% compared with 2019 in all segments, including:

- **Renewables**: +3.6GW in RE connected to the distribution grid in 2021 (+104%). More than 500,000 photovoltaic installations connected(4)
- **Electric mobility**: +190% connections between 2021 and 2020

---

(1) According to the Singapore Smart Grid Index which measures how smart networks are (57 countries).
(2) 7.25% + 3% bonus (depending on costs, deadlines and the system performance in the roll-out phase).
(3) Excluding exceptional events and transmission network incidents.
(4) 90% of installed wind and photovoltaic capacity is connected to the distribution grid.
ITALY: SUCCESSFUL STRATEGIC REPOSITIONING OF EDISON

DEVELOPMENT OF A RENEWABLE PLATFORM

Reorganisation of the renewable assets of Edison in Italy within a new platform: acquisition of the remaining stake in the E2i holding company, and entry of a financial partner

Target of 4GW of installed capacity by 2030 (1.1GW at end-2021, +9% vs 2020)

No. 2 in the wind power market in Italy

FOCUS ON CORE BUSINESSES

Finalised disposal of the E&P business

Disposal of Infrastrutture Distribuzione Gas (IDG)

NEW DEVELOPMENTS

SUPPLY

Customer growth (+4.3% vs 2020)

Increase in value added services (boilers, air conditioners, electric mobility charging points, etc.)

Growth in contracts/customer to more than 1.4

ENERGY EFFICIENCY SERVICES

Solutions to support industrial customers and public administrations to maximise their energy efficiency and reduce their environmental impact

HYDROGEN

Partnerships for the construction of H₂ production plants on industrial sites

(1) Edison retains control over the new platform.
(2) Gross capacities in wind and solar.
(3) Exploration and Production activities, except in Algeria.
(4) Number of B2B and B2C customers (delivery points).
(5) Among others: Alboran (220 MW in Puglia), Dalmine (140 MW in Lombardy), Deus (45 MW in Sicily).
INTERNATIONAL: SUCCESS IN ENERGY TRANSITION PROJECTS AND PROGRESS IN HYDROPOWER

SUCCESS IN ENERGY TRANSITION PROJECTS

PROJECT FINANCING SECURED
Financing finalised ($1bn non-recourse) for an innovative solar and gas project based on a 480MW solar plant in Chile

ELECTRICITY TRANSMISSION
Contract won in the UAE, in a consortium, to develop and operate, a 3.2GW underwater transmission system\(^1\) over a 35-year operating period

PROGRESS ON HYDROPOWER PROJECTS

POWERPLANT CONSTRUCTION PROJECTS
Construction of Nachtigal (420MW) in Cameroon: More than half of the civil engineering and electromechanical work completed. Industrial commissioning planned for 2024

Mpatamanga project (350 MW) in Malawi: consortium including EDF selected as preferred bidder

ASSISTANCE TO PSHP\(^2\) PROJECT MANAGEMENT
Hatta (250MW) in the UAE: 35% progress rate on construction supervised by EDF

---

\(^1\) Direct-current high voltage transmission system.
\(^2\) Pumped storage hydropower plants.
DISPOSAL AND COST SAVINGS PLANS COMPLETED ONE YEAR AHEAD OF SCHEDULE

DISPOSALS: €3.7bn ACHIEVED AT END-2021 VS TARGET OF ~€3bn BETWEEN 2020 AND 2022(1)

REFOCUSD ON CORE BUSINESS / DISPOSAL OF CARBON-INTENSE ACTIVITIES

- E&P(2) business and gas distribution network (IDG) at Edison
- Waste treatment: Dalkia Wastenergy
- Gas plant in the UK(3)

ACCELERATED DEVELOPMENT

- Edison renewables: entry of a financial partner(4)
- Electric mobility: Pod Point IPO(5)

REAL ESTATE ASSETS

- Property assets in France

COMPANIES NOT CONTROLLED

- 49.99% share in US nuclear power stations (CENG)

OPERATING EXPENSES: CUMULATIVE REDUCTION OF €545m AT END-2021 VS TARGET OF €500m BETWEEN 2019 AND 2022(6)

- Development: +0.3
- Maintenance and ongoing activities: +0.3

- In €bn

Cumulative OPEX(6) reduction of €545m at end-2021 vs 2019

- Action plan: -1.1

(1) Signed or completed disposals: impact on the Group’s economic debt reduction (S&P definition). The impact on net financial debt was around €3bn.
(2) Exploration and Production activities, except in Algeria.
(3) West Burton B.
(4) Edison retains control over the new platform.
(5) Minority IPO 25%. EDF remains the majority shareholder.
(6) Sum of personnel expenses and other external expenses. At constant scope, standards, exchange rates and pension discount rates and excluding inflation. Excluding costs of sales of energy service activities and of nuclear engineering services of Framatome and of specific projects such as Jaitapur.
2022 - A CHALLENGING YEAR

EXCEPTIONAL MEASURES LIMITING PRICE INCREASE IN 2022 (1)

Additional allocation of 20TWh of ARENH(2) volumes for 2022
12-month postponement to February 2023 of part of the tariff increase relative to 2022(3)

OUTAGES OR EXTENSION OF OUTAGES OF NUCLEAR REACTORS

Owing to the detection of defaults on the pipes of the safety injection system(4)
French nuclear output estimate updated to 295-315TWh for 2022 and to 300-330TWh for 2023(5)

In €bn

EBITDA 21

~ +6

Energy price effect

~ -10

Regulatory measures(7)

~ -16

Nuclear output (6)(7)

EBITDA 22

~ Other effects

EBITDA 22

(1) See 13 January 2022 press release.
(2) ARENH: Regulated access to historic nuclear power. Attribution of an additional 20TWh for the period from 1 April 2022 to 31 December 2022 at €46.2/MWh.
(3) For residential regulated tariffs customers and “blue professionals” and for all professionals located in the non-interconnected zones (ZNIs).
(4) See 13 January, 7 February and 11 February press releases.
(6) Estimated figures depending on market prices and other effects.
(7) See 14 March 2022 press release.
ACTION PLAN TO SUPPORT GROWTH STRATEGY

BALANCE SHEET STRENGTHENING

- **Rights issue**: €3.16 billion\(^{(1)}\). The French State has indicated its intention to subscribe to its share of EDF’s capital

- **Scrip dividend**
  - EDF will offer the option to receive a scrip dividend\(^{(2)}\) for fiscal years 2022 and 2023
  - The French State has indicated its intention to opt for the scrip dividend for both years

- Additional **disposals** of ~€3 billion\(^{(3)}\) over 2022-2024

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\(^{(1)}\) With preferential subscription rights guaranteed, including issue premium and based on, for illustrative purpose, a reference price of €8 per share and a discount in line with market practices. See press releases on 18 March 2022 and on 5 April 2022.

\(^{(2)}\) Target payout ratio of net income excluding non-recurring items (adjusted for the remuneration of hybrid bonds accounted for in equity) for 2022 and 2023 of 45-50%.

\(^{(3)}\) Signed or completed disposals: impact on the Group’s economic debt reduction (S&P definition).
SHARE CAPITAL INCREASE WITH PSR (1): MAIN CHARACTERISTICS & OPERATION’S RESULTS

Key features of the EDF Rights Issues

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>€3,1bn (498 millions of new shares)</td>
</tr>
<tr>
<td>Subscription party</td>
<td>2 new shares for 13 existing shares</td>
</tr>
<tr>
<td>Subscription price</td>
<td>€6.35 per new share</td>
</tr>
<tr>
<td>Discount</td>
<td>25.5% of the theoretical ex-rights price at the close the 16 March 2022</td>
</tr>
</tbody>
</table>

Operation’s results

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total demand</td>
<td>€4,1bn</td>
</tr>
<tr>
<td>Rate subscription</td>
<td>129%</td>
</tr>
<tr>
<td>Total market demand</td>
<td>€1,4bn</td>
</tr>
<tr>
<td>Rate subscription</td>
<td>280%</td>
</tr>
</tbody>
</table>

Thus the State holds 83.88% of share capital (3,134,481,623 shares) and 88.76% of right votes vs 83.88% of share capital and 89.18% of right votes before the operation

Subscription on an irreducible basis

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right exercised</td>
<td>3,208m</td>
</tr>
<tr>
<td>Subscribed shares</td>
<td>494m i.e. €3,134m</td>
</tr>
<tr>
<td>Granted shares</td>
<td>494m i.e. €3,134m</td>
</tr>
<tr>
<td>Rate subscription</td>
<td>99.07%</td>
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</tbody>
</table>

Subscription on an reducible basis

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested shares</td>
<td>149 M i.e. €947m</td>
</tr>
<tr>
<td>Granted shares</td>
<td>4.6 M i.e. €30m</td>
</tr>
<tr>
<td>Rate subscription</td>
<td>0.93%</td>
</tr>
</tbody>
</table>

(1) PSR = Preferential Subscription Rights
THE EDF GROUP

➢ GROUP STRATEGY P. 6
➢ CORPORATE RESPONSIBILITY - CSR P. 19
➢ HIGHLIGHTS P. 34
➢ INNOVATION & TRANSFORMATION P. 45
➢ GOVERNANCE P. 51
CAP 2030 INNOVATION: EDF PULSE, INCUBATOR OF INTERNAL PROJECTS AND INVESTMENTS IN START-UPs (1/2)

MISSION

CREATE COMPETITIVE NEW OFFERS AND INNOVATIVE SERVICES FOR OUR CUSTOMERS CONSISTENT WITH THE GROUP’S RAISON D’ÊTRE

DRIVERS

INVESTOR
in external start-ups or joint ventures

PARTNER
of mainstream and multi-sector funds (Eurazeo, EIP, Supernova, DBL, CleanH₂…)

INCUBATOR
Intrapreneurship programme for Group employees, including subsidiaries

RESOURCES

Over €270m
invested since its creation in 2017

20
strategic venture capital funds partners

Over 25
start-up collaborations and creations
## CAP 2030 INNOVATION: EDF PULSE, INCUBATOR OF INTERNAL PROJECTS AND INVESTMENTS IN START-UPs (2/2)

### INVESTMENTS BETWEEN SEPTEMBER 2017 AND DECEMBER 2021

<table>
<thead>
<tr>
<th>SUSTAINABLE TERRITORIES</th>
<th>PRODUCTION-TOOL PERFORMANCE</th>
<th>SERVICES FOR RESIDENTS</th>
<th>DECENTRALISED ENERGY SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>hynamics</td>
<td>teepttrak</td>
<td>securkeys</td>
<td>neot</td>
</tr>
<tr>
<td>zenpark</td>
<td>metroscope</td>
<td>Archipels</td>
<td>agregio</td>
</tr>
<tr>
<td>Monkey Factory</td>
<td>PowerUp</td>
<td>algar</td>
<td>e2m</td>
</tr>
<tr>
<td>itk</td>
<td>seclab</td>
<td></td>
<td>dreev</td>
</tr>
<tr>
<td>McPhy</td>
<td>PowerUp</td>
<td></td>
<td>store &amp; forecast</td>
</tr>
<tr>
<td>urbanomity</td>
<td>Enerbrain</td>
<td></td>
<td>exaion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EDF**
CAP 2030: AN IMPULSE OF TRANSFORMATION FOR THE EDF GROUP

Building an effective and empowering work environment that fosters engagement and meets the new expectations of customers, employees and all stakeholders

**CAP 2030, a transformation programme**

- Transformation of operational business lines
- Transformation of support subsidiaries
- Innovation
- Management practices and Leadership ambition
- Digital technologies and uses

**Efficiency and performance**

- Simplify organisation systems
- Challenge practices
- Empower the teams

**Selected achievements and initiatives in 2021**

- Deployment of the excell plan
- Obtaining “Responsible digital” certification
- Renewal of “Responsible suppliers and purchases” certification
- A new Innovation and Pulse Programmes department created
- Signature of a collective agreement entitled “Work Differently, Manage Differently”
- Implementation of simpler and more digital processes
  - Generalised roll-out of electronic signatures
  - Large-scale implementation of collaborative tools
  - Data, AI, Blockchain, etc.
  - Automation of repetitive tasks
R&D: INNOVATE TODAY AND VENTURE INTO TOMORROW

Through the expertise of its researchers, its testing resources and digital capacity, EDF R&D is preparing the future and opening up new possibilities in the world of energy. EDF’s R&D covers all the business areas and activities in the energy sector. In line with EDF group’s raison d’être and cap 2030 strategy, its research focuses on three main priorities:

- Electricity transition
- Climate transition
- Digital and societal transition

➢ R&D mobilises its energy experts for the benefit of the EDF group entities and subsidiaries, as well as external customers. It relies on more than 70 platforms for testing, measurement and simulation, among the most modern and effective in the world, in all areas of the energy sector.

➢ R&D also provides its customers with expertise in large-scale digital simulation software and supercomputers. EDF’s R&D has a computing capacity of 11 petaFLOPS, making it one of the largest players in this field.

EDF SA’S R&D IN 2021

- 2,263 employees worldwide (EDF SA)
- 160 PhD students
- 9 research centres:
  - 3 in France
  - 6 internationally (Germany, United Kingdom, China, United States, Singapore and Italy)
- 20 joint laboratories with partners
- + 300 academic and industrial partnerships around the world
- 756 patented innovations protected by 2,158 property titles in France and abroad
- €487 million budget in 2021 (EDF SA)
- 99% of R&D operating budgets in France dedicated to decarbonation and energy system transition

R&D PRESENT ON ALL CONTINENTS

Three research centres in France and six internationally, as well as an office in Brussels. Based in regions home to a wealth of innovative technologies and business models, EDF’s international research centres manage or support key Group projects on microgrids, hydrogen, offshore wind, and mobility.
R&D INNOVATES TO PREPARE FOR THE FUTURE
THE CONTRIBUTION OF R&D TO SOME MAJOR ACHIEVEMENTS OF THE EDF GROUP

➢ **OFFSHORE WIND POWER**
R&D supports EDF Renewables on fostering the development of the floating offshore wind power sector. In particular, it brings its know how in modelling.

➢ **AGRI PV**
An innovation that responds to the challenges of the solar power plan: cohabitation between traditional agricultural activity and a photovoltaic installation.

➢ **LITE DERMS**
An affordable and scalable microgrid management solution to accelerate electricity access worldwide.

➢ **EPIFLEX**
This approach, underway at Dunkerque, enables the design of ecological industrial parks that enhance regional energy-material flows through the implementation of exchange networks and innovative technologies.

➢ **CHARGING STATIONS**
R&D contributes to the reliability and durability of the charging stations rolled out by Group entities (IZI, IZIVIA, DREEV) by testing and qualifying the equipment.

➢ **INTERACTIVE IMMERSIVE PLANT**
R&D provides the nuclear fleet with a virtual-reality simulator to train field agents.

➢ **SMR**
R&D pursues its research work on the NUWARD SMR, co-developed by the technological consortium including EDF, the CEA, Technicatome and Naval Group. It is working to support the Nuclear New Build Department on simplifying the architecture and integration of passive safety systems.

➢ **RESPONSE**
A European H2020 project by the EDF Group, overseen by EIFER and aimed at promoting “positive-energy neighbourhoods”, with Dijon as the pilot city in France.

➢ **STORAGE**
The R&D centre is fully committed in EDF’s storage plan. It is in particular reviewing battery life, performance and recycling.
THE EDF GROUP

➢ GROUP STRATEGY P. 6
➢ CORPORATE RESPONSIBILITY - CSR P. 19
➢ HIGHLIGHTS P. 34
➢ INNOVATION & TRANSFORMATION P. 45
➢ GOVERNANCE P. 51
## BOARD OF DIRECTORS OF EDF

### CHARACTERISTICS OF THE BOARD OF DIRECTORS’ COMPOSITION
- 18 directors, of which 11 directors appointed by the General Shareholders and 6 directors elected by the employees
- In 2021, 14 meetings with an attendance rate of 95.2%
- 41.7% independent qualified directors
- 50.0% of women sitting on the Board
- Skills and expertise in line with the diversity policy which was adopted by the Board, updated in 2021
- Staggered renewal of the directors (4-year term of office, renewed by half every 3 years)

### DIRECTORS APPOINTED AT THE GENERAL SHAREHOLDERS’ MEETING
- Jean-Bernard LÉVY, CEO
- Nathalie COLLIN
- Bruno CREMEL
- François DELATTRE, appointed on recommendation of the French State
- Gilles DENOYEL, appointed on recommendation of the French State
- Delphine GENY-STEPHANN, appointed on recommendation of the French State
- Colette LEWINER
- Marie Christine LEPETIT, appointed on recommendation of the French State
- Claire PEDINI
- Philippe PETITCOLIN
- Michèle ROUSSEAU, nommée sur proposition de l’État

### DIRECTOR REPRESENTING THE FRENCH STATE
- Martin VIAL

### DIRECTORS ELECTED BY THE EMPLOYEES
- Claire BORDENAVE
- Karine GRANGER
- Sandrine LHENRY
- Jean-Paul RIGNAC
- Vincent RODET
- Christian TAXIL

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(1) Excluding directors representing the employees (corporate governance AFEP-Medef Code).
(2) Term of office expiring at the end of the General Meeting called to approve the financial statements for 2022.
(3) Term of office expiring at the end of the General Meeting called to approve the financial statements for 2024.
(4) Term of office expiring on 20 November 2022.
(5) Term of office expiring on 22 November 2023.
BOARD OF DIRECTORS COMMITTEES

AUDIT COMMITTEE
- 8 members, of which 4 director representing the employees
- 75% of independent directors (1)
- 6 meetings in 2021
- Attendance rate of 97.9% in 2021

NUCLEAR COMMITMENTS MONITORING COMMITTEE
- 6 members, of which 3 director representing the employees
- 3 meetings in 2021
- Attendance rate of 100% in 2021

STRATEGY COMMITTEE
- 8 members, of which 4 director representing the employees (2)
- 3 meetings in 2021
- Attendance rate of 100% in 2021

APPOINTMENT, COMPENSATION AND GOVERNANCE COMMITTEE
- 8 members, of which 1 director representing the employees
- 66.67% of independent directors (3)
- 6 meetings in 2021
- Attendance rate of 97.9% in 2021

CORPORATE RESPONSIBILITY COMMITTEE
- 6 members, of which 3 director representing the employees
- 66.67% of independent directors (3)
- 5 meetings in 2021
- Attendance rate of 95% in 2021
- The Chair of the Committee is the Climate Referent of the Board of Directors

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(1) Excluding directors representing the employees (corporate governance AFEP-Medef Code )
(2) Directors who are not members of the Strategy Committee may attend its meetings
(3) Excluding directors representing the employees (corporate governance AFEP-Medef Code )
EDF GROUP EXECUTIVE COMMITTEE

- Jean-Bernard LÉVY Chairman and Chief Executive Officer (CEO)
- Marc BENAYOUN Group Senior Executive Vice President in charge of Customers, Services and Territories. He also oversees Edison and the Group’s gas business
- Bruno BENSASSON Group Senior Executive Vice President in charge of Renewable Energies, chief Executive Office of EDF Renewables.
- Béatrice BUFFON Group Senior Executive Vice President in charge of the International Division
- Christophe CARVAL Group Senior Executive Vice President in charge of Group Human Resources
- Xavier GIRRE Group Senior Executive Vice President in charge of Group Finance
- Véronique LACOUR Group Senior Executive Vice President in charge of Change Management and Operational Efficiency
- Cédric LEWANDOWSKI Group Senior Executive Vice President in charge of Nuclear and Thermal business
- Alexandre PERRA Group Senior Executive Vice President in charge of Innovation, Corporate Social Responsibility and Strategy
- Simone ROSSI Group Senior Executive Vice President, CEO of EDF Energy
- Pierre TODOROV Group Senior Executive Vice President and Group General Secretary
- Alain TRANZER, General Representative for Industrial Quality and Nuclear Skills
- Xavier URSAT Group Senior Executive Vice President in charge of Engineering and New Nuclear Projects

Paul-Marie DUBEE Senior Executive Vice President in charge of Executive Coordination and Government Relations, is also discharging clerical duties for the Executive Committee
EDF: SHAREHOLDING STRUCTURE AS OF 31/12/2020

(1) On 15 January 2018, the French State entered into a share allotment agreement with EPIC Bpifrance. At 31/12/2021, BPI France owns 343,863,121 shares. The French state and EPIC Bpifrance act together and have to consult each other before every Shareholders’ Meeting of EDF. The EPIC Bpifrance has undertaken not to transfer the securities, to put them back as collateral or otherwise to dispose of them.

By law, the French State must hold at least 70% of EDF’s share capital.
## EDF: A LISTED COMPANY MAJORITY OWNED BY THE FRENCH STATE

### EDF STATE-OWNED COMPANY: LEGAL AND CONTRACTUAL FRAMEWORK

- EDF’s chairman and CEO is appointed by decree of the President of France on recommendation of the Board of Directors, after opinion of the relevant committees of the French National Assembly and the Senate.
- The Board of Directors can be composed of 3 to 18 members, including members appointed by the Shareholders’ Meeting, a State representative, and one-third of employees’ representatives elected in accordance with the provision of the Act of 26 July 1983.
- Some decision related to financials, investments, acquisitions and disposals, or related to the compensation of executive officers must be subject to specific authorization procedures (the Order of 20 August 2014 and the Decree of 9 August 1953).
- The company is subject to controls by different authorities: State Inspector, Cour des Comptes (Government Audit Body), Finance Inspection.
- The French State Shareholdings Agency (APE) represents the State as a shareholder.

### EDF LISTED COMPANY: CORPORATE GOVERNANCE

- EDF has to abide by listed companies laws and specific standards of a public sector entity.
- EDF adheres to the corporate governance AFEP-Medef Code and reports on its application.
- EDF is subject to the rules relative to the balanced representation of women and men on Boards of Directors and has to respect the proportion of members of the Board of each sex of not less than 40%, excluding directors that represent the employees (Commercial Code and executive order of 20 August 2014).
- In accordance with AFEP-Medef Code, the EDF Board must include a third of independent qualified members. The appointments of directors proposed to the General Meeting are in line with the diversity policy applicable to Board members (French Commercial Code).
- The Board of Directors has created five dedicated committees to review and prepare certain projects before their submission to the Board of Directors.
- The Appointments, Compensation and Governance Committee reports annually on the functioning of the Board of Directors and proposes areas for improvement. Furthermore, every 3 years, this evaluation is conducted by a specialist external consultant under the supervision of the Committee.
- EDF comply with internal control procedures COSO.

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1. If need be upon recommendation from the State, in accordance with article 6 of the Order of 20 August 2014.
2. Appointed by the Minister of Economy amongst State agents, in accordance with article 4 of the Order of 20 August 2014.
3. In accordance with the independance criteria indicated by the AFEP-Medef code.
EDF’S INTERACTION WITH THE FRENCH STATE SHAREHOLDING AGENCY (APE)

➢ The French State Shareholding Agency, embodies and conducts the missions of the shareholder State as part of the policy directions determined by the French government. An entity with national competency under the authority of the Ministry of the Economy, Finance and Recovery, it manages the investment portfolio of the State, which invests in equity and quasi-equity in companies deemed as strategic so as to stabilise their share capital and support them in their development and transformation.

➢ The APE’s main missions are to:
  • Embody the asset-related interests of the State in its management policy
  • Favour the economic performance of businesses as well as their long-term profitability and valuation
  • Promote the informed shareholder role of the State in company governance bodies
  • Manage the investment portfolio through acquisitions, mergers and shareholder alliances
  • Encourage exemplary behaviour in terms of pay, equality and social and environmental responsibility

➢ As a result, public-sector businesses are notably obliged to:
  • Inform the APE of any investment operation Regularly organise meetings with the APE on the company’s strategy and financial aspects
REGULATORY FRENCH BODIES WITH AN IMPACT ON EDF’S ACTIVITIES

THE FRENCH NUCLEAR SAFETY AUTHORITY (ASN)

The ASN helps monitor nuclear safety and radiation protection and informs the public in these fields. Its activity is focused on several main missions:

➢ Regulation through the submitting of opinions to the French government on draft decrees and ministerial orders, and through the technical regulatory decisions it adopts

➢ The individual authorisations it grants for the operation of the plants, in particular the authorisations for restarting after the reactor outages

➢ Monitoring of the facilities that it carries out through the on-site regulatory inspections, scheduled or unannounced (with an average of 650 INB inspections per year, including 349 on nuclear power plants), in particular during compliance reviews and safety reassessments, which are mandatory for continued operation of the plant

THE FRENCH ENERGY REGULATION COMMISSION (CRE)

The CRE ensures the proper functioning of the electricity and gas markets for the end-customers in compliance with the energy policy objectives. The regulation fields include:

➢ Energy networks
  • Access to regulated networks and their operation and development
  • Independence of network operators

 ➢ Energy markets
  • Monitor deals on energy and CO₂ markets
  • Monitor retail markets (for instance, making proposals for regulated tariffs’ evolution)

➢ Regulated tariffs
  • As per the provisions of the French Energy Code, the CRE is in charge of proposing the regulated electricity sale tariffs
OTHER CONTROL PROCEDURES INVOLVING EDF

➢ EDF may be subject to State audit procedures, in particular through economic and financial assessment and through verifications by the French General Finance Inspectorate (Inspection Générale des Finances)

➢ The company’s accounts and management, and where applicable, those of its directly-held majority subsidiaries are under the control of the National Audit Court (Cour des comptes). Thus, have been published on the Cour des comptes website:

  • The report on EDF’s international strategy (16/03/2016)
  • The report on the Électricité de Strasbourg group’s management (20/05/2015)
  • The summary proceedings on working hours in the Group’s main entities (16/09/2013)
  • The summary proceedings to the Minister for the Ecological and Inclusive Transition and to the Minister of Economy and Finance on the assessment of the implementation of Regulated Access to Historic Nuclear Power (ARENH) (15/03/2018)
  • The 2019 annual public report, Volume II, on the wage policy at EDF SA (06/02/2019)

➢ EDF must also undergo the audit procedures performed by the French Parliament
EDF group supplies electricity and gas to some 38.5 million customers worldwide: residential customers, businesses, and local government. It is a major energy provider on key European markets: France, the UK, Italy and Belgium. The Group is seeking to move into new geographical areas, developing low-carbon solutions in growing countries and strengthening its positions in Europe.
EDF GROUP’S NET INSTALLED CAPACITY* BY COUNTRY AT END-2021

* Net capacity according to EDF’s percentage ownership in Group companies, including associates and joint ventures.

In MW

EDF GROUP'S NET INSTALLED CAPACITY* BY COUNTRY AT END-2021

<table>
<thead>
<tr>
<th>Country</th>
<th>Nuclear</th>
<th>Gas (including cogeneration)</th>
<th>Fossil-fired (coal and fuel oil)</th>
<th>Renewables (including hydropower)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>109,584</td>
<td>68,405</td>
<td>5,710</td>
<td>25,978</td>
</tr>
<tr>
<td>Germany</td>
<td>112</td>
<td>249</td>
<td>249</td>
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</tr>
<tr>
<td>France</td>
<td>92,535</td>
<td>61,370</td>
<td>4,660</td>
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<td>Italy</td>
<td>5,734</td>
<td>4,383</td>
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<tr>
<td>UK</td>
<td>7,647</td>
<td>6,096</td>
<td>1,015</td>
<td>366</td>
</tr>
<tr>
<td>United States(4)</td>
<td>4,291</td>
<td>1,071</td>
<td>3,220</td>
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<tr>
<td>Brazil</td>
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<td>Canada</td>
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<tr>
<td>Chile</td>
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<td>United Arab Emirates</td>
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</tbody>
</table>

(1) Including small hydropower plants in mainland France and assets in overseas France.
(2) The Le Havre coal power plant has been shut down in April 2021.
(3) Closing of 2 out of 4 West Burton A units. Closing of the coal power plant of West Burton A planned in September 2022.
(4) Excluding energy storage capacity and EDF Renewables biogas production capacity.

N.B. The values correspond to the first decimal or integer closest to the sum of the precise values, taking into account rounding.
EDF GROUP’S NET OUTPUT* BY COUNTRY AT END-2021

* Net output according to EDF’s percentage ownership in Group companies, including associates and joint ventures.

In GWh

547,856
409,766
18,627
39,846
79,618

Europe 489,728

France (1)(2)
421,022
354,394
8,435
9,801
48,391

UK (3)
37,355
33,368
490
2,601
895

Italy
16,810
12,367
4,410

Belgium
9,023
6,252
1,743
928

Netherlands
1,744
1,744

Germany
616
616

Spain
40

Poland
129

Switzerland
269

Portugal
360

Greece
2,362
1,834
528

Turkey
387

Netherlands
1,744

Middle East 1,274

Chile
1,072

Britain
241

Israel
495

South Africa
181

United Arab Emirates
392

Africa 334

Egypt
153

Poland
129

Africa
334

Mexico
727

South Africa
181

Sudan
181

South Africa
181

(1) Including small hydropower plants in mainland France and assets in overseas France.
(2) The Le Havre coal power plant has been shut down in April 2021.
(3) Closing of 2 out of 4 West Burton A units in October 2021. Closing of the coal power plant of West Burton A planned in September 2022.
(4) Excluding energy storage capacity and EDF Renewables biogas production capacity. The nuclear production corresponds to the 2021 production of the CENG plants, sold in August 2021

N.B. The values correspond to the first decimal or integer closest to the sum of the precise values, taking into account rounding.
FRANCE – COUNTRY PROFILE

KEY POINTS

- EDF is active across the whole electricity value chain, from generation to sales and optimisation/trading. The activities can be split into:
  - **Non regulated activities**: generation and supply, optimisation and trading
  - **Regulated activities**, with RTE (transmission) and Enedis (distribution). EDF’s activities in Corsica and the French overseas departments and municipalities are managed by the Island Energy Services (SEI), Island Electric Production (PEI) and are regulated, as well as the activities of the subsidiary ÉS (Électricité de Strasbourg)
- EDF owns the largest nuclear fleet worldwide, o/w 56 operating plants in France
- RTE and Enedis are subsidiaries of EDF but are operationally independent (legal unbundling), within the meaning of the provisions of the French Energy Code
- EDF also plays a holding role through the 100% control of EDF Renewables and EDF International (which controls the greater part of EDF stakes in international subsidiaries) as well as stakes in various companies, including:
  - EDEV (o/w, Électricité de Strasbourg, etc.)
  - Dalkia (energy services provider of which Dalkia Electrotechnics / Citelum)
  - EDF Trading (market operator for the Group)
  - Framatome (supplier in the nuclear industry), see the p. 91

INSTALLLED CAPACITY AND OUTPUT IN 2021

<table>
<thead>
<tr>
<th>CAPACITY</th>
<th>MW</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>61,370</td>
<td>69</td>
</tr>
<tr>
<td>Hydro (a)(c)</td>
<td>20,120</td>
<td>23</td>
</tr>
<tr>
<td>ENR excl. hydro (4)</td>
<td>2,235</td>
<td>3</td>
</tr>
<tr>
<td>Thermal (b)(d)</td>
<td>4,945</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong> (e)</td>
<td>88,670</td>
<td>100</td>
</tr>
</tbody>
</table>

- a. Excl. Corsica and the French overseas department, i.e. 439MW in 2021
- c. Tidal capacity of 240MW included.

<table>
<thead>
<tr>
<th>OUTPUT</th>
<th>TWh</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>360.7</td>
<td>86</td>
</tr>
<tr>
<td>Hydro (e)(f)</td>
<td>41.8</td>
<td>10</td>
</tr>
<tr>
<td>ENR excl. Hydro (4)</td>
<td>4.5</td>
<td>1</td>
</tr>
<tr>
<td>Thermal (g)</td>
<td>10.5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>417.5</td>
<td>100</td>
</tr>
</tbody>
</table>

- e. Excl. Corsica and the French overseas department, i.e. 1.3TWh in 2021
- f. Output including pumped volumes
- g. Excl. Corsica and the French overseas department, i.e. 4.8TWh in 2021

<table>
<thead>
<tr>
<th>EBITDA 2021 of the France Segments excl ENR</th>
<th>€m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation &amp; supply</td>
<td>7,394</td>
</tr>
<tr>
<td>Regulated</td>
<td>5,992</td>
</tr>
</tbody>
</table>

(1) RTE is consolidated by the equity method via the CTE holding company
(2) Subsidiaries managed with complete independence, within the meaning of the provisions of the French Energy Code
(3) For more information on the Electricité de Strasbourg activities, please see the p. 149
(4) For more information on the Renewables activities including EDF Renewables, please see the p. 112, including investments in affiliates and joint ventures.
(5) Data from fully consolidated entities
MARKET DEVELOPMENT IN FRANCE

Nationalisation of the electricity and gas sector pursuant to the Law of 8 April 1946


New tariff construction method by costs stacking (ARENH price, cost of supply of the complementary purchases, on wholesale power markets, electricity networks and commercial costs, plus a normal rate of return)

CRE proposal on new tariff, then Ministerial order, that only has an opposition right

On 1 January 2012, ARENH price was set to €42/MWh

1 July 2011: NOME law entered into force guarantying to EDF’s competitors, for a 15-year transitory period, a regulated and limited access to EDF’s historical nuclear generation capacity (ARENH) to supply their end customers located in France. The available global energy volume cannot exceed 100TWh(1) per year

Regulated electricity sales tariffs (TRV). 31 December 2015: end of Yellow and Green regulated tariffs 1 January 2016: The CRE is henceforth in charge of proposing changes to the regulated tariffs

Capacity market mechanism implemented in 2017

Regulation: Beginning of the global negotiation as part of the future regulation on existing nuclear facilities underway between the French government and the European Commission (negotiations have not resulted in 2021)

France multi-year energy programme (PPE): Project published (25 January 2019)

ARENH: Requests from suppliers at the November 2021 application process of 160TWh for 2022. Maximum global volume of 100TWh. The CRE proceeded with a cropping

1(1) Excluding supply losses
2(2) For more information on the capacity auctions in France see p161 and on the impact on EDF’s EBITDA, please see p.163
## France Relance & France 2030 Plans and EDF

<table>
<thead>
<tr>
<th>Energy Renovation of Buildings</th>
<th>France Relance</th>
<th>France 2030</th>
<th>EDF Entities Benefiting from these Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Strengthen the energy renovation of private housing (€2bn spread over 2021 and 2022, the “MaPrimRenov” scheme), social housing (€0.5bn) and public buildings (€4bn) and €0.2bn for VSB-SMB</td>
<td></td>
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<tr>
<td></td>
<td>➢ €1.2bn over 2020-2022</td>
<td>➢ €5bn by 2030</td>
<td>dalkia</td>
</tr>
<tr>
<td></td>
<td>➢ Low carbon heat (heat recovery, biomass, heat pump, waste-to-energy, heat network, etc)</td>
<td>➢ Reduce greenhouse gas emissions by 35% compared with 2015</td>
<td>cham</td>
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<tr>
<td></td>
<td>➢ Energy efficiency and electrification of processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry Decarbonation</td>
<td>➢ €490m over 2020-2022</td>
<td>➢ €1bn by 2030 devoted to:</td>
<td>edf</td>
</tr>
<tr>
<td></td>
<td>➢ Maintain skills and support the competitiveness of businesses</td>
<td>– the development of small modular reactors and innovative reactors enabling the fuel cycle to be closed</td>
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<tr>
<td></td>
<td>➢ Promote innovation, in particular the development of French small modular reactors (SMR) Nuward</td>
<td>– the development in France innovative small-scale nuclear reactors with enhanced waste management</td>
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<tr>
<td></td>
<td>➢ Création of the Fund France Relance Nucléaire</td>
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<td></td>
<td>➢ Deploy the Fessenheim “Technocentre” project (recycling of very-low-level metal waste)</td>
<td></td>
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<td></td>
<td>➢ Finance innovative solutions for radioactive waste management</td>
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</tr>
<tr>
<td>Nuclear</td>
<td>➢ Put France at the forefront of generation technologies of renewable and low-carbon hydrogen (€7.1bn by 2030, of which €3.4bn by 2023)</td>
<td>➢ Become the leader in green hydrogen</td>
<td>edf</td>
</tr>
<tr>
<td>Hydrogen and Renewables</td>
<td></td>
<td>➢ In 2030, France will be home to at least two electrolyser gigafactories and produce huge quantities of hydrogen</td>
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<tr>
<td></td>
<td>➢ The target is to invest over €500m in disruptive technologies and renewable energies, particularly onshore and offshore wind and photovoltaic</td>
<td>➢ The target is to invest over €500m in disruptive technologies and renewable energies, particularly onshore and offshore wind and photovoltaic</td>
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<tr>
<td></td>
<td></td>
<td>➢ Produce nearly 2 million electric and hybrid vehicles by 2030</td>
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<tr>
<td>Electric Mobility</td>
<td>➢ Increased support for the purchase of clean vehicles (€1.9bn)</td>
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<td></td>
<td>➢ Acceleration in the deployment of charging stations for electric vehicles: 100,000 charging stations expected in France by 2021, accessible to the public</td>
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</tbody>
</table>
2021 FACTS & FIGURES

UNITED KINGDOM – COUNTRY PROFILE

**KEY POINTS**

**Main entity:**

**EDF Energy**, one of the UK’s largest energy companies and the largest producer of low carbon electricity

**3 principal activities:**

1. **Customers and services**: power and gas supply and customer services for residential and business customers (5.5 million residential customer accounts at the end 2021 for EDF Energy). Optimisation and risk management services for the EDF group as well as for third parties, via EDF Trading (see p.154)

2. **Generation**: 13 reactors in 7 nuclear power stations (1), 1 coal-fired power station (2) (with open-cycle gas turbine (OCG)) and 1 gas-fired power station (3). Renewable energy generation from wind farms by EDF Renewables (JV EDF Energy and EDF Renewables) (see p.113 ff.)

3. **Nuclear New Build**: In partnership with China General Nuclear Corporation (CGN), EDF is building two new nuclear units (3.2GW capacity in total) at Hinkley Point C in Somerset, based on the EPR technology. EDF Energy is also leading the development of plans for a similar 3.2GW EPR project at Sizewell in Suffolk, with active support from the UK Government and discussions ongoing regarding the funding of the project

**Strategy:**

➢ The purpose of EDF Energy is to help Britain, in the context of its transition to Net Zero
➢ Cost efficiency and an effective, resilient operating model remain key priorities
➢ In electricity generation, EDF’s key priority is to sustain safe, reliable and commercially viable operations. This includes supporting security of supply.

---

**2021 supply market share**

- **Electricity supply**: ~43TWh ~11% (4)
- **Domestic Gas supply**: ~36TWh ~10% (4)

**2021 key figures**

<table>
<thead>
<tr>
<th>Capacity (MW)</th>
<th>Output (TWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear (1)</td>
<td>7,833</td>
</tr>
<tr>
<td>ENR (6)</td>
<td>366</td>
</tr>
<tr>
<td>Gas (3)</td>
<td>-</td>
</tr>
<tr>
<td>Fossil-fired excl. gas (5)</td>
<td>1,015</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9,214</strong></td>
</tr>
</tbody>
</table>

**Did you know?**

The **Pod Point** acquisition has strengthened and created significant value for EDF Energy in the UK. In 2021, the Pod Point growth has been secured by an IPO

In 2021, EDF Energy accelerated the promotion of Electric Vehicles (EV) solutions for its existing customer base, and capture a significant share of customers churning when buying an EV

---

(1) At December 2021 (after closure of Dungeness B and Hunterston B) and including Centrica’s 20% stake.
(2) The West Burton A Power Station entered into partial decommissioning on 1st October 2021, reducing the available units from 4 to 2.
(3) The West Burton A CCGT Power Plant was sold on 31st August 2021.
(4) UK Gas and Electricity market share as per Cornwall data at end of Oct 2021.
(5) Coal capacity represents transmission entry capacity, net power including biomass.
(6) For more information on the Renewables activities including EDF Renewables, please see the p.112, including investments in affiliates and joint ventures.
(7) Data from fully consolidated entities.
ITALY – COUNTRY PROFILE

KEY POINTS

The Italian gas and electricity markets are strategic for EDF firstly for their major significance in Europe, secondly for their connection to the French markets and the key position in the Mediterranean basin.

Edison:

- Edison is a major player (1) in the Italian energy market and is active in:
  - the production of power from renewable sources and gas
  - in gas midstream activities (supply of natural gas mainly through long term contracts, storage and distribution)
  - in the sale of electricity, gas as well as energy and environmental services to the final market and services and infrastructures for sustainable mobility (small scale LNG)
- Edison has recently changed its business model by disposing its E&P activities (2) and entered a financial partner in 49% of Edison Renewables (5) with the goal to accelerate capacity development, in order to play as a responsible operator and a leader in the transition of Italy to an efficient and clean sustainable energy.

Key strategic priorities:

- **RENEWABLES**
  - Increase wind and PV capacity from 1.1 to 4 GW gross by 2030 with a development plan of €3bn investments by 2030
  - 40% of the production from renewable sources by 2030
  - Development of flexibility tools (storages etc.)
- **CLIENTS AND SERVICES**
  - Increase customer base and competitive positioning
  - Help clients and territories to achieve competitiveness, efficiency, environmental sustainability and personal well-being
  - Support mid-large clients and PA in reducing energy costs and environmental footprint
- **GAS/ GREEN GAS ACTIVITIES**
  - Development of latest gas generation to offset typical intermittency of non-programmable renewable sources and to reduce emissions
  - Be a key contributor in green gases development (H₂ and bio-CH₄)

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2021 GROUP KEY FIGURES IN ITALY

<table>
<thead>
<tr>
<th></th>
<th>Capacity (MW)</th>
<th>Output (TWh)</th>
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</thead>
<tbody>
<tr>
<td>Thermal</td>
<td>4,472</td>
<td>12.8</td>
</tr>
<tr>
<td>Hydro</td>
<td>866</td>
<td>2.7</td>
</tr>
<tr>
<td>Other renewable</td>
<td>1,068</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,406</strong></td>
<td><strong>17.4</strong></td>
</tr>
</tbody>
</table>

(1) According to the 2021 ARERA report based on 2020 data Edison is the 3rd largest producer at national level.
(2) Excluding Algeria the divestment of which is planned at a later date.
(3) For more information on energy efficiency activities, see p.181
(4) For more information on the group gas activities, see pages 188
(5) Edison retains control over the renewables platform

---

18.9Gm³ of gas sold to end customers
O/w 11% to the residential sector, 31% to the industrial sector and 27% for thermoelectric uses (including Edison’s own internal needs)

12.7Gm³ of natural gas imports by Edison, i.e. 18% of the country’s natural gas imports. Long-term gas supply contracts in countries other than Russia

1.6 million sales contracts of power, gas and energy services
The Benelux region includes important interfaces with the Franco-German electric power plate and plans for new connections to Germany and Great Britain are under consideration. The Benelux is also an important node in the European gas market due to its numerous import and transit infrastructures.

Key entities:

- **Luminus**
  - EDF majority shareholder (68.63%), through EDF Belgium (100%)
  - 2nd largest player in the Belgian energy market with 10% of the national generation capacity. Total electricity output of 7.0TWh in 2021.
  - Present in renewable energies through 7 hydropower plants.
  - Leader in wind power with **82 onshore wind farms**, the Group built 25 wind turbines with an additional capacity of 67MW in 2021, for a total of **658MW**
  - Thermal park in Belgium composed of several plants (combined cycles and open cycles) for a total installed capacity of **1,208MW**
  - Owning 10.2% (419MW) of the nuclear power plants Tihange 2 and 3, and Doel 3 and 4. Luminus also has 100MW of drawing rights on the French Chooz B nuclear power plant.
  - On the B2B market, acquisitions of Elektro Clarysse, Chauffage Coussemant and Emaco International, strengthening the Luminus position in energy services

- **EDF Belgium**: wholly-owned by EDF, it holds 50% of the Tihange 1 nuclear plant, or 481MW, representing 2% of Belgian generation capacity

- **Sloe Centrale B.V. (Netherlands)**: with top-level technical performances, the CCGT Sloe plant was called on to operate for 5,029 hours with an availability rate of over 98%

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**2021 key figures**

<table>
<thead>
<tr>
<th>Pays</th>
<th>Company</th>
<th>Main activities</th>
<th>Technical data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>EDF Belgium</td>
<td>Electricity generation</td>
<td>Nuclear installed capacity: 481MW</td>
</tr>
<tr>
<td></td>
<td>Luminus</td>
<td>Electricity generation</td>
<td>Installed capacity: 2,358MW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electricity and gas sales</td>
<td>16.5% gas market share and 17.8% electricity market share in Belgium</td>
</tr>
<tr>
<td></td>
<td>Sloe Centrale B.V</td>
<td>Electricity generation</td>
<td>Installed capacity CCGT: 870MW</td>
</tr>
</tbody>
</table>

In 2021, EBITDA in Belgium amounted to €125 million (Luminus: €70m, EDF Belgium €55m)

Did you know?

By end-2024, the company aims to generate **828MW of wind power**. This ranks Luminus as a wind-power leader in Belgium. The company’s 82 onshore wind farms comprise 263 turbines, located in Wallonia and Flanders.

In 2021, Luminus was awarded the Top Employers in Belgium for the 10th consecutive year.
NORTH AMERICA – AREA PROFILE

Electricity

➢ In North America the group has more than 6GW of gross installed capacity and sold the stake in CENG nuclear business in 2021.
➢ Activities:
  • Renewable energies: EDF Renewables holds 7.1GW of net capacity installed or in construction, mainly located in the USA, and close to 12.9GW managed for own account or third parties
  • Trading: EDF Trading operates in the Northern American markets for electricity (including financial transmission rights) and gas markets. EDF Trading activities also include trading of RECs (1), biogas, carbon emissions and credits and weather derivatives
  • Framatome also helps to supply electricity to 36m North American households

Energy services

➢ Trading: EDF Energy Services (a wholly-owned subsidiary of EDF Trading North America) provides management and optimization services to thermal, wind, PV and hydro power plants generators
➢ Local energy management and energy efficiency: through Dalkia, a 100% owned subsidiary of the EDF group.

Energy supply

➢ Commercialisation of gas and electricity: EDF Trading, through its subsidiary EDF Energy Services, is part of the Top 3 suppliers to non-residential customers in North America, offering all environmental products, natural gas and electricity

R&D

➢ EDF Innovation Lab: located in Silicon Valley, this R&D and Innovation team partners with local Universities and Utilities to develop innovative projects on the future of energy markets, distributed resources integration and electric mobility. It also works with EDF Corporate Venture Capital in order to identify relevant investment opportunities among US startups

(1) Renewable Energy Certificate
SOUTH AMERICA – AREA PROFILE

Brazil

➢ EDF Norte Fluminense (EDF NF)
  • The Group owns 100% of EDF Norte Fluminense, which has built and operates a CCG\(^1\) with an installed capacity of 826MW
  • EDF NF owns 51% of Sinop Energia (CES), which is responsible for the construction and operation of the Sinop hydroelectric facility (402MW) commissioned in 2019
  • In 2021, EDF Norte Fluminense signed a 10-year contract for assistance in the construction, operation and maintenance of the Marlim Azul Combined Cycle Gas Power Plant.

➢ EDF Renewables: (100% owned subsidiary of EDF) has been present in Brazil since 2015, with a net capacity of 480MW in wind power (Ventos da Bahia and Folha Larga Phase), and 199MW in solar power (ex: Pirapora II) as well as 380MW in wind power under construction

➢ EDF is also present in Brazil through the activities of Edison (Iberitermo subsidiary (50% stake) which operates a CCG of 226MW)

Chile

➢ The group subsidiary EDF Andes (\(^2\)) acquired 755MW of flexible generation capacity (gas and peak) in 2018 to support the development of its renewable activity in Chile by compensating for the fluctuations in wind and solar generation. EDF Andes is converting to gas one of its two peakers

➢ Since September 2021 EDF Andes has launched the construction of a 480MW solar power plant. EDF Renewables hold the solar power stations of Bolero (146MW gross) and Santiago Solar (115MW gross), and the wind farm of Cabo Leones 1 (175MW gross). Cabo Leones has extended its capacity to +60MW in 2021

Peru

• Signature of a RE PPA with the town of Iquitos (Peru - 500,000 h. - the largest non-interconnected city in the world): 100 MW PV + 100 MWh battery

• Call for tenders won to modernize and decarbonize small isolated electrical systems in Peru through decentralized production for approximately 100,000 inhabitants, equal to 55 MW of solar energy and 110 MWh of batteries. Construction launched
Since 2010, EDF Renewables has owned a subsidiary in Israel in solar energy. At end-2021, it had 412MW of gross installed capacity, 104MW under construction, an additional 400MW won as part of calls for tenders, to be connected in 2023-2024.

EDF Renewables Israel won several new calls for tender in 2021 for circa 35MW of projects combining photovoltaic generation with other land uses (farming, landfills, etc.) and some 70MW on the installation of photovoltaic roofs and shaded areas by 2024.

The subsidiary is also active in the fields of electricity storage, wind power and wave energy.

The "Dumat Al Jandal" wind project co-developed by EDF Renewables and Masdar was commissioned in December 2021. With an installed capacity of 400MW, the wind farm is the first one in Saudi Arabia and the most powerful in Middle East

EDF Renewables, in partnership with Masdar and Nesma Renewables, has begun work on the 300MW “South Jeddah” photovoltaic project. Due to be commissioned in 2023, South Jeddah will be the Group’s first photovoltaic project in Saudi Arabia.
The EDF group is one of the largest foreign investors in the electricity sector in China, with shareholdings in nuclear, renewable and thermal power plants for a total net capacity of 3,400MW (1).

**Nuclear**
- As the first foreign company to invest in a project to build and operate a nuclear power plant in China, EDF owns 30% of Taishan (TNPJVC), which operates two EPR nuclear reactors. Unit 1 was the first EPR in the world to enter commercial service in December 2018 and Unit 2 was commissioned in September 2019.
- Partnership with CGN: On 29 September 2016, EDF and CGN signed the final contracts for the Hinkley Point C power plant project (2). EDF’s stake in Hinkley Point C is 66.5% and CGN’s is 33.5%.

**Thermal**
- EDF owns 49% of FZPC, which built and operates the “ultra-supercritical” coal-fired power plant of Fuzhou. This technology ensures better efficiency (~ 44% for Fuzhou) and limited environmental impact. EDF holds minority shares in two other thermal power plants.
- Consistent with its commitment to withdraw from coal-generated electricity by 2030, EDF has begun to sell off its thermal assets with the transfer of two units of the Shiheng plant on 1 January 2022.

**Renewables**
- EDF Renewables acquired in 2016 a majority share (80%) in UPC Asia Wind Management (AWM), which develops and builds wind power projects in China. In 2018, EDF Renewables diversified its activities in distributed solar power by creating a joint venture with ACC to develop solar roof solutions for industrial customers. End-2021, net installed capacity amounts to 254MW in wind and 123MW in solar power.
- In offshore wind energy, EDF Renewables is operating the Dongtai IV (302MW) and Dongtai V (200MW) wind farms in partnership with China Energy Investment.

**Energy services**
- In 2021, the Group commissioned two air-conditioning networks for a tourist complex and a business district.
- EDF operates since 2016, a heating network in the city of Sanmenxia (Henan). In the nearby town of Lingbao, EDF operates a 30-35MW biomass cogeneration power plant.

---

(1) Data in proportion to EDF’s equity
(2) For more information on the Hinkley Point C EPR project, see p. 84-85
(3) SC = “supercritical” technology, USC = “ultra-supercritical” technology
### SOUTHEAST AND SOUTHERN ASIA – AREA PROFILE

#### India
- In March 2018, the EDF group and the Indian energy company NPCIL\(^1\) signed an industrial agreement for the construction of 6 EPRs on the Jaitapur site in India. With a total power of about 10GW, Jaitapur would be the largest nuclear project in the world \(^2\).
- Dalkia Electro technologies / Citelum, an EDF subsidiary specialised in street lighting, is also present in India where it manages 178,000 lighting points in the city of Ahmedabad.
- A roll-out smart meters project was signed in 2018 and officially launched in March 2019 with EESL 3 for 5 million Smart meters, and with NDMC for 75,000 Smart meters installed by EDF International Networks.
- **Wind and solar power sectors:** At the end of 2021, the Group’s installed renewables power (excl. Hydro) capacity is 586MW net.

#### Vietnam
- In 2021, EDF owns 56.25% of Mekong Energy Company (MEOC), the company that owns Phu My 2.2, a combined cycle plant with a capacity of 715MW. This is the 1st exclusively foreign-investment IPP \(^3\) project launched in Vietnam. The BOT contract (Build, Operate, Transfer) has a duration of 20 years. In 2005, EDF completed the turnkey delivery of the plant, which MCO now operates.
- The Son My 1 project concerns the construction and operation of a regasified LNG (liquefied natural gas) combined cycle plant with optimised environmental performance of approximately 2,250MW, scheduled to be commissioned in 2025. In March 2018, the EDF group was appointed leader of the consortium (37.5%) to study the project.

#### Indonesia
- In 2021, EDF continues its **development strategy in Indonesia** by focusing on renewable energy projects and the acceleration of access to electricity in the country's most distant islands thanks to the **development of microgrids**.

#### Laos
- **At the end of 2021**, the Group **owns 40% of Nam Theun 2 Power Company** (NTPC), which owns the Nam Theun 2 Hydropower Complex (1,070MW installed capacity), built by EDF under a turnkey contract. NTPC company operates the power plant on a 25-year contract.
- A project to develop an hybrid floating solar farm of 240 MW on the Nam Theun 2 hydroelectric dam reservoir was launched in 2019. In 2021, signature of a PDA \(^4\) with the Laos government and a MoU with partners.

#### Singapore
- In 2014, the EDF Group opened a centre of excellence for sustainable cities in Asia, called **EDF Lab Singapore Pte. Ltd** (the “Lab”)
- The Group has now established a solid base in Singapore to coordinate its development in South-East Asia, boost synergies with the Lab and contribute to the development and innovation ecosystem relative to smart grids, electric mobility, smart cities and interconnections. The goal is to increase the share of renewable energies in traditionally high-carbon countries.
AFRICA – AREA PROFILE

The Group wishes to develop in Africa by assisting countries with high-energy demand, on a selective basis appropriate to each geographical region, and by building sustainable and multi-industry partnerships. EDF is also intensifying its action in the supply of competitive off-grid energy.

South Africa

➢ Since 2007, EDF has a subsidiary in Johannesburg, focused on reviving the South African nuclear program and the development of the Group activities in Austral Africa

➢ Wind energy sector: Since 2011, EDF Renewables has been developing in the wind market and operates 4 wind farms with a gross capacity of 142MW through its 84%-owned EDF Renewables South Africa subsidiary.

➢ In December 2018, EDF acquired 30% of GIBB POWER, a subsidiary of the South African group GIBB Engineering and Architecture, in order to increase its activity in thermal engineering, hydraulics, transmission and distribution services.

Morocco

➢ Solar energy sector: In 2019, the EDF Renewables – Masdar - Green Of Africa consortium successfully bid for the first phase of the Noor Midelt 1 solar project in Morocco, using a hybrid solar-storage technology. This hybrid solar project with an installed capacity of 800MW innovatively combines concentrated solar power (CSP) and photovoltaic solar power. Discussions with the different stakeholders about the planning are ongoing.

➢ Wind energy sector: EDF-RE (60%) is developing the Taza wind farm (150 MW project, with a 1st phase of 87MW). The PPA was signed at the end of 2019. The construction of the first phase began on the 2 September 2020. EDF-R Morocco is supporting MASEN in the renewal of the Koudia al-Baida wind farm with the objective of doubling its capacity to 100MW. Set to begin in 2022.

Egypt

➢ Solar energy sector: In 2019, EDF Renewables commissioned the 130MW Benban plants in partnership with the Egyptian group Elsowedy Electric. EDF Renewables also took a strategic share in the Egyptian company KarmSolar to tackle the private PPAs and micro-grid market.

Cameroon

➢ EDF has started in February 2019 the construction works on the Nachtigal hydroelectric dam (420MW), and will operate it through its 40% stake in Nachtigal Hydro Power Company (NHPC). 52.8% of the project achieved at 31/12/2021

➢ In June 2021, EDF and the State of Cameroon signed a Development Agreement for a second hydroelectric dam, on the Sanaga river, on the site of Kikot, with capacity of about 450MW.

Ivory Coast

➢ In partnership with SIFCA, the Ivorian agro-industrial group and Meridiam, EDF is developing the "Biovéa" biomass plant project (2 x 23MW); the biggest of Western Africa. The concession agreement was signed with the State in December 2019. The financing was finalised in late 2021 and the start of work is planned to early 2022.

➢ In 2019, EDFI took a 49% stake in Conergies Group with top-flight development and innovation expertise in heating, ventilation, industrial and solar cooling in West Africa.

Off-Grid

➢ EDF has more than 20 years of experience in the field of "Off-Grid" (decentralized energy). In addition to the historical activities of KES in South Africa (company created in 2002 and 50 % owned by EDF) and ERA (Senegal), the Group partners with innovative start-ups to provide energy and services to a rural clientele in South Africa, Ivory Coast, Ghana, Senegal, Kenya, Zambia and Togo.

➢ Such services enable more than 1.5 million people to light and power their low-consumption household appliances or also to be equipped with solar-powered water pumps.

➢ EDF aims to multiply this figure by 2 over the next 4 years.
As a major player in energy transition, the EDF group is an integrated energy company active in all areas of the electricity industry and some areas of the gas industry: power generation using nuclear, renewable and thermal energies; electricity transmission and distribution; sales; energy services; energy trading.

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## ELECTRICITY OUTPUT AS OF 31 DECEMBER 2021

*Output from fully consolidated entities*

<table>
<thead>
<tr>
<th>(in TWh)</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>384.1</td>
<td>409.8</td>
</tr>
<tr>
<td></td>
<td>76.5%</td>
<td>78.3%</td>
</tr>
<tr>
<td>Hydro (1)</td>
<td>49.4</td>
<td>46.2</td>
</tr>
<tr>
<td></td>
<td>9.8%</td>
<td>8.8%</td>
</tr>
<tr>
<td>ENR</td>
<td>19.3</td>
<td>20.9</td>
</tr>
<tr>
<td></td>
<td>3.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Gas</td>
<td>42.0</td>
<td>38.0</td>
</tr>
<tr>
<td></td>
<td>8.4%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>5.0</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Coal</td>
<td>2.2</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>0.4%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Group</td>
<td>501.9</td>
<td>523.7</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

NB: The values correspond to the expression to the first decimal or integer closest to the sum of the precise values, taking into account rounding.

(1) Hydro output includes tidal energy for 540GWh in 2020 and 543GWh in 2021. Hydro output after deduction of pumped volumes is 43.2TWh in 2020 and 40.3TWh in 2021.
EDF GROUP MAIN BUSINESSES

- NUCLEAR P. 77
- RENEWABLES P. 112
- THERMAL POWER P. 133
- REGULATED ACTIVITIES (NETWORKS) P. 136
- OPTIMISATION & TRADING P. 150
- CUSTOMER SOLUTIONS P. 166
- ENERGY SERVICES P. 181
- GAS P. 188
EDF: UNIQUE EXPERTISE AND KNOW-HOW IN THE NUCLEAR INDUSTRY

EDF, THE WORLD’S LEADING NUCLEAR OPERATOR (1)

- EDF is the world’s leading nuclear operator (1) with a standardised nuclear fleet of 56 reactors in France and 13 reactors in Great Britain.
- EDF is investing to continue the operation, safely, of its reactors beyond 40 years in France to guarantee the competitiveness of electricity generation.
- Construction of EPR-type reactors throughout the world (France, Great Britain), development of an optimised version of the EPR (EPR 2) for the renewal of the French nuclear fleet by 2030 and development of a type of SMR, Nuward™, with the CEA, TechnicAtome and NavalGroup (2).
- EDF is present in the French and international markets for the decommissioning of nuclear power plants and radioactive waste treatment facilities.
- To operate the existing nuclear fleet beyond 40 years, and building the success of the first reactors to pass their fourth ten-year inspection to extend their operating life, EDF plans to invest €50.2 billion over the period 2014-2025 as part of the “Grand Carénage” programme. The ASN authorised on the 23 February 2021 the lifetime of the 900MW fleet beyond 40 years.
- The pooling of EDF and Framatome engineering teams in a joint subsidiary Edvance (3), implements the re-engineering of the French nuclear sector, for new projects in France and abroad.
- Follow-up of the excell Plan, to strengthen the industrial quality, the skills, and the governance of the large nuclear projects (for more information, see The excell plan p.17)

EDF, GLOBAL EXPERTISE

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(1) AIEA (Agence Internationale de l’Énergie Atomique). Nuclear power reactors in the world, 2017 edition
(2) Technology partnership
(3) Edvance, bringing together EDF’s and Framatome’s engineering expertise around the nuclear island
WORLD NUCLEAR CAPACITY EXPECTED TO EXPAND OVER THE NEXT QUARTER CENTURY

- Today, nuclear power represents ~9.5% of global output
- Planned shutdown of old reactors
- 392GW in operation at end-2020
- 607GW in operation at end-2040
- ~357 reactors to be decommissioned
- ~250 reactors to be built

The world’s primary energy demand is expected to grow by 25% by 2030. This period will be marked by an accelerated growth of the electric share of energy consumption: +4,500TWh by 2030. The electricity share in the world’s final energy consumption is expected to reach 30% in 2040, compared to 20% in 2020 (1).

The share of nuclear power in global output is expected to stay relatively stable between 2020 and 2040, at 10%.

According the IEA, the aim to reach carbon neutrality by 2050 would need up to 730GW of installed nuclear capacity.

The New Nuclear Development

2 EPR reactors in operation at end-2021

- China / Taishan
- France / Flamanville
- UK / Hinkley Point

- 1st Unit: start of commercial operation on 13 December 2018
- 2nd Unit: start of commercial operation on 7 September 2019
- Entering the quasi-final phase
- Penetration welds repairing finished
- Completion of the 1.5m and 5.15m slabs in Unit 1 reactor building
- Lift of the 2 liner rings onto Unit 2 reactor building
- Electricity generation of the first reactor expected in June 2026 (2)

In 2016, EDF also signed two other agreements with CGN concerning development of two nuclear construction projects in the UK, Sizewell C and Bradwell B. The UK Government is in active negotiations with EDF on the Sizewell C project.

In March 2018, EDF and the Indian company NPCIL signed an industrial agreement relative to the construction by NPCIL of six EPRs at the Jaitapur site in India.

On 14 December 2018, EDF submitted a complete and conditioned technical and commercial offer, then a conditioned binding offer in April 2021.

In 2040, IEA (1) expects ~10% of global output to be nuclear power

EDF Group (EDF SA, Framatome, Edvance) drives the French nuclear sector with the following goals:

- Make project delivery and management more effective by harnessing each company’s core strengths and the synergies from Framatome’s integration into EDF group and the pooling of the EDF and Framatome engineering teams as part of the joint subsidiary Edvance
- Enhance the competitiveness and appeal of our technologies and services through complementary expertises
- Provide development opportunities for the French nuclear sector by ensuring ever greater engineering and business expertise in integrated projects

A promising market and active projects on every continent
TECHNOLOGY EPR: MAIN CHARACTERISTICS

➢ **Safety**
  - Accident probability reduction (factor 10)
  - External hazard protection (shell able to resist an airplane crash)
  - Evolutionary design (core catcher)

➢ **Target performance**
  - Annual generation boosted by 36%
  - Efficiency improvement (+3pts)
  - Increased availability (91%)

➢ **Radioprotection**
  - At least 40% cut in collective annual exposure

➢ **Environment**
  - Very important reduction in radioactive waste and gaseous and liquid discharges
FLAMANVILLE 3 EPR (1,650MW) (1/2)

CONSTRUCTION PROGRESS

All the fuel required for the first loading now received. First regulatory inspection performed by Euratom in August 2021 confirming the good site organisation in terms of reception and storage of nuclear materials

More than 90% completion rate in the reactor building, in the machine room, and in the diesel rooms.

UPGRADE ON THE MAIN SECONDARY CIRCUIT WELDS

Penetration welds: Repairing the welds located on the pipes within the double concrete containment of the reactor building

- Number of welds involved: 8 VVP (1) and 4 ARE (2)
- Status: 8 penetration welds repaired, all checked as compliant by EDF prior to stress-relieving heat treatment. The 4 ARE welds are awaiting ASN’s decision on the qualification of the repair process proposed by EDF

Other welds: Upgrading and repairing welds

- Number of welds involved: 45 VVP (1) and 32 ARE (2)
- Status: 70% of the welds involved (VVP and ARE) are being upgraded. To date, 12 VVP welds are completed before stress-relieving heat treatment

Stress-relieving heat treatment

- VVP penetration welds: optimised stress-relieving heat treatment processes validated by the ASN
- Other welds and ARE penetration welds: part of the optimised stress-relieving heat treatment has been validated by the ASN. The pending validations, based on the supporting files provided by EDF, concern around 60 welds

(1) Steam discharge pipework circuit
(2) Water supply circuit for steam generators
Main primary circuit: incomplete consideration of the “break preclusion” referential concerning three nozzles
In a letter dated 8 October 2021, the ASN confirmed that it had no opposition in principle to the solution proposed by EDF, which consists in installing a “Retainer Clamp” for the treatment of these three nozzles. The design file for this solution will be examined by the IRSN.

Filtration sump SIS/CHRM (1)
- Test results carried out in summer 2021 at the ASN’s request: fragments filtration issue detected
- An action plan has been defined and presented to the ASN in December 2021. The instruction is ongoing

Lessons-learned from the technical issue at the Taishan No.1 reactor
Inspections carried out on fuel assemblies of the Taishan No. 1 reactor following the technical issue encountered during its second operating cycle showed mechanical wear (2) of certain assembly components. In the perspective of the commissioning of Flamanville 3, a solution will be instructed with the ASN, in order to carry out the potential necessary modifications.

In its press release on 12 January 2022, EDF has updated these elements taking account of the progress on operations and preparations for commissioning. The fuel-loading date was postponed to Q2 2023. The estimated construction completion cost has increased from €12.4bn to €12.7bn (3).

Costs arising from post-commissioning modifications are not included in the construction cost of the project.

The project has no margin either in terms of schedule or completion costs.

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(1) SIS = Safety injection system, CHRM = containment heat removal system
(2) See press release of 12 January 2022
(3) In 2015 euros, excluding interim interest (see note 10.6 of the Group financial statements). This estimate takes into account the analytical allocation of part of the compensation paid by AREVA under the settlement agreement reached on 29 June 2021.
HINKLEY POINT C: PROJECT OVERVIEW

<table>
<thead>
<tr>
<th><strong>Location</strong></th>
<th>Bridgwater, Somerset, UK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>Two UK EPR reactors</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>3.2GW (2 x 1.6GW)</td>
</tr>
<tr>
<td><strong>Operating life</strong></td>
<td>60 years+</td>
</tr>
<tr>
<td><strong>Responsible Designer</strong></td>
<td>EDF</td>
</tr>
<tr>
<td><strong>Main contractors</strong></td>
<td>Framatome, GE, Bouygues/Laing O’Rourke, Alliance of Cavendish Nuclear/Balfour Beatty/Altrad/NG Bailey and Doosan Babcock</td>
</tr>
<tr>
<td><strong>Contract for difference</strong></td>
<td>CID strike price fixed over 35 years: £2012 92.50/MWh or £2012 89.50/MWh (indexed to British inflation) if a FID is taken for Sizewell C</td>
</tr>
<tr>
<td><strong>Investors’ participation</strong></td>
<td>EDF Energy: 66.5% ; CGN: 33.5%</td>
</tr>
</tbody>
</table>
• Since the beginning of the pandemic, the project has taken extensive measures to guarantee the safety of workers on site and in its offices. These measures are being continuously adapted to apply best practices and to be able to keep the number of infections as low as possible.
• Covid still has an impact on the project’s productivity.
• Number of people working on site increased from c. 5,000 in January to c. 7,400 at end-2021

○ The 1.5m and 5.15m slabs in the reactor building of Unit 1 are completed
○ The 2,500 m$^3$ concrete table that will support the turbine of Unit 1 is completed
○ First liner ring (382 tons) lifted into the reactor building of Unit 2 in Q4 (see picture below)

The project’s targets in terms of schedule and cost at completion were updated on 27 January 2021 on the following basis:

- The start of electricity generation of Unit 1 has been set at June 2026, compared to end-2025 as initially announced in 2016
- The project completion costs are estimated at £2015$^{22}$ to £2015$^{23}$bn (1) corresponding to £26 to 27bn in current pounds
- The risk of COD delay of Units 1 and 2 is estimated respectively at c.15 and 9 months. The probability of realisation of this risk is high

- The risks on the schedule and completion costs have increased in 2021 due to the continuing impact of Covid in 2021, lower than expected civil performance, tensions in global building materials markets and Brexit impacts. Plans are being developed to mitigate the delays and actions are in place to drive civil performance. At end-2021, the actual costs (2) for the whole project (3) stood at £15.3bn at nominal values (or £2015$^{13.6}$bn). Due to the difficulties encountered by the project and the increase in risks, a new comprehensive review to update the costs and schedule estimates announced in January 2021 is underway and is expected to be finalised by summer 2022
- The agreements between EDF and CGN include a compensation mechanism between both shareholders in case of overrun of the initial budget or delays. This mechanism is applicable and will be triggered when the time comes. This arrangement is part of the agreements signed between EDF and CGN in September 2016 and is subject to a confidentiality clause.
- As the project’s total financing needs exceed the contractual commitment of the shareholders (committed equity), shareholders will be asked to provide additional equity (voluntary equity) with an end date, estimate to date, at end-2023. This could lead the Group to increase its contribution to the project financing and to increase its stake (currently 66.5%) if its partner decided not to contribute to these additional equity commitments

(1) Costs net of operational action plans, excluding interim interest and at a reference exchange rate for the project of £1 = €1.23.
(2) Costs calculated by deflating estimated costs in nominal terms using the British Construction OPI for All New Work index
(3) Excluding interim interest. The interim interest stand at €835m

Costs calculated on the basis of a 2% inflation assumption for the construction period
SIZEWELL C

MAIN ASPECTS

- Project of 2 UK European Pressurised Reactors (EPR) at Sizewell on the Suffolk coast for a total capacity of 3.2GW
- Power supply to 6 million households for around 60 years
- Replication as much as possible of the Hinkley Point C design and supply chain
- FID (1) subject to the conditions being met

(1) Final Investment Decision
(2) Announcement made on 27 October 2021 as part of the 2022-2025 UK government’s spending review

KEY ELEMENTS

Key aspects of the project
- As of today, EDF’s stake is 80% and CGN's is 20%.
- By the date of FID at the latest, EDF plans to reduce its stake to no more than 20%
- After FID, EDF group intends to supply the design, some key nuclear equipments and components as well as associated services

UK government support for the development of nuclear projects (2)
- Up to £1.7 billion allocated to the development of large-scale nuclear projects over the period 2022-2025
- The UK government is in active negotiations with EDF on the Sizewell C project

Regulation:
- Under a nuclear RAB (Regulated Asset Base) model, electricity suppliers would be charged, as the users of the electricity system, the cost of the project. This model aims to enable investors to share the project’s construction and operating risks with consumers.
- The terms of the RAB model and a Government Support Package (GSP) are currently being discussed

Financing until FID:
- EDF has planned to pre-finance development up to its share of an initial budget of £458M
- Ongoing discussions with the UK government on the financing of the remaining development costs until the FID
- In this context, the UK government has decided a £100 million government funding in January 2022 in exchange for an option over the site land or over EDF’s shares in the project company.

Development Consent Order (DCO): Decision by the UK’s Secretary of State expected by the end of May 2022

Conditions for the FID:
- EDF’s ability to participate in the FID alongside other investors depends on the fulfilment of some conditions including :
  — Sufficient funds to finance the development costs until FID
  — A regulation framework, risk-sharing mechanism and GSP allowing private investors (debt and equity) to invest
  — An appropriate financing structure during construction and operation and sufficient investors and debt holders willing to invest in the project. This is subject in particular to achieving an investment grade credit rating to attract private capital
  — An agreement with the key suppliers on the key contracts
  — Obtaining all the required consents and permits, including DCO
  — The ability not to consolidate the project in the Group’s financial statements (including in the calculation of the economic indebtedness by the rating agencies) after the FID
- Not meeting these conditions could lead the Group not to take a FID
Through the Jaitapur project, the EDF group has been involved in Franco-Indian civil nuclear cooperation since 2010 within the framework of bilateral agreements signed between France and India. It is directly based on the energy transition objectives of the Indian government, set out during the Paris Conference in 2015, which aim to drive forward the increased share of renewable and nuclear energies in the country. Jaitapur is in Maharashtra state and will be the largest nuclear power site in the world.

Acting as head of the French nuclear power sector, EDF entered into exclusive negotiations with NPCIL in 2016.

- In March 2018, EDF signed a non-binding industrial cooperation agreement (IFWA (1)) with Indian national electricity firm Nuclear Power Corp. of India Ltd. (NPCIL) for the construction of six EPR reactors in Jaitapur. This agreement sets out the industrial plan, the roles and responsibilities of partners, and the next steps of the project.
- In this regard, the EDF group and its partners would supply all the studies and equipment for the nuclear island, the conventional island, the auxiliary systems, and the cooling source.
- It is not expected that EDF will be an investor in the project.

- In its capacity as the owner and future operator of the Jaitapur Nuclear Power Station, NPCIL is expected to be responsible for obtaining all authorisations and certifications required in India, and for constructing all six reactors and site infrastructures. EDF and its industrial partners would assist NPCIL during the construction phase.
- In accordance with the IWFA (1), EDF submitted a non-binding complete technical-commercial offer to NPCIL on 14 December 2018, and then a binding offer in April 2021.
- Negotiations aiming at a signature of a GFA (General Framework Agreement) and allowing the project to start, are ongoing on this basis.

(1) Industrial Way Forward Agreement
TECHNICAL ISSUE AT THE TAISHAN EPR

MAIN ASPECTS OF THE TAISHAN EPR

- EDF holds a 30% stake in TNPJVC(1), which operates two EPR nuclear reactors (1,750MW each) in Taishan in the Guangdong Province.
- The commercial commissioning of unit 1 was on 13 December 2018 and that of unit 2 on 7 September 2019. After their initial 18-month fuel cycle, each unit carried out its first “Initial Complete Visit” outage with reloading.
- The 2021 output level was affected by the scheduled outage of unit 2 (first complete visit) and the unplanned outage of the unit 1 for five months owing to a technical issue.

TECHNICAL ISSUE: FEEDBACK

- Atypical evolution of radiochemical parameters, leading to suspicion that fuel assembly rods had become unsealed (2).
- Shutdown of reactor 1 and defueling operations in August 2021.
- According to investigations on the fuel assemblies, the loss of sealing would be due to a deterioration of the rod cladding owing to mechanical wear stemming from the rupture of small rod hold-down systems in the assemblies (3).
- After an investigation by the competent authorities, this review could, eventually, result in adjustments to the manufacturing process and the implementation of a different technology to hold the rods in place in the assemblies.
- Inspections of the assemblies and the interior of the vessel have also revealed a localised phenomenon between the assemblies and a component covering the core related to hydraulic exposure. Studies are underway to determine arrangements to reduce interactions between the assemblies and the core barrel.
- An analysis concerning the other EPR projects is ongoing.

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(1) Taishan Nuclear Power Joint Venture Company Limited
(2) See the 14 June 2021 and 22 July 2021 press releases
(3) See 12 January 2022 press release
NEW NUCLEAR: SMR (SMALL MODULAR REACTOR) NUWARD™ PROJECT

• Development of NUWARD™, a small modular reactor (SMR), in technical partnership with CEA, Naval Group and TechnicAtom

• Nuclear plant of two pressurized water reactors (PWR) of 170MWh each

PROGRESS AND COSTS

• Currently in the « Conceptual Design » phase (setting main design options and starting to size main systems and components)

• The French State has granted €50m of subsidies to the Nuward project in December 2020 as part of the recovery plan “Plan de relance”. Additional support of €500 million was announced by the French President in February 2022
**EUROPEAN PRESSURISED REACTOR 2 (EPR2)**

**MAIN ASPECTS OF THE PROJECT**

- **A nuclear reactor with the same strengths as the EPR**: the same security level (one of the highest in the world) and the same power and environmental performance, etc.
- **Fully integrating feedback** from all EPR sites worldwide and the fleet in operation
- **Designed to be operated as part of a mix with a substantial renewable energy component** by 2040 through management flexibility (manoeuvrability).
- **In a programme of three pairs of reactors (six EPR2s)** to benefit from volume effects in technological terms, notably in equipment purchasing and construction-phase services, as well as later in operation and maintenance.
- **Electrical power of an EPR nuclear power station**: 1,670MW

**FINANCIAL ASPECTS**

Planned overall cost for a programme of six EPR2s: around €50bn<sub>2020</sub>

**SCHEDULE PROPOSED BY EDF**

- Proposal by EDF and nuclear sector for an execution programme presented to the French government in May 2021
- The construction schedule proposed by EDF and the nuclear sector is based on one pair of EPR2s every four years, with 18 months between each production unit of the same pair
- The first pair of reactors, at Penly, is scheduled to be commissioned between 2035 and 2037

**1.670MW EPR2 power plant**
FRAMATOME, A MAJOR INTERNATIONAL PLAYER IN THE NUCLEAR INDUSTRY

An international presence

Benchmark supplier in the nuclear industry

- Designer and supplier of nuclear steam supply system and nuclear equipment, services, fuel and control systems for high levels of safety and performance
  - **Management of major nuclear projects**: management and implementation of reactor construction projects and replacement of major components
  - **Engineering, licensing and R&D**: development, design and licensing of boilers and associated services. Research and development on future reactors
  - **Equipment manufacturing**: manufacturing plants for heavy and mobile components of the nuclear island (vessel, piping, steam generators, …)
  - **Instrumentation and control**: design and manufacture of instrumentation and safety control systems for nuclear power plants
  - **Nuclear fuel design and supply**: development, design, licensing and manufacturing of fuel assemblies and components for all types of reactors (PWR, VVER, BWR and research reactors)
  - **Services activity**: solutions for the maintenance, modernisation, life extension and cyber security of reactors in operation and under construction. Decommissioning activities.

- **€3.4bn** in sales (1)
- **€3.7bn** backlog (1)
- More than **60 sites** in **20 countries** (1)
- More than **15,000 employees** (1)

(1) Data at the end of 2021
68.9% (1) of French power generation in 2021

56 reactors in operation with a capacity of 61,370 MW

18 sites

A unique technology, PWR (Pressurised Water Reactors), 3 series:

- 900MW  32 reactors  29GW with an average age of 39 years
- 1,300MW  20 reactors  26GW with an average age of 33 years
- 1,450MW  4 reactors  6GW with an average age of 21 years

Did you know?

The whole fleet in operation today has been built using the same technology (PWR). This standardisation allows for operational synergies and greater efficiency.

EDF is responsible for the design, building and operation of the reactors and considers the safety of its facilities as an absolute priority.
OPERATING PRINCIPLES OF A PRESSURISED WATER REACTOR (PWR)

Nuclear power plant without air cooling

Fuel building
houses a pool in which the spent fuel waiting to be transferred for reprocessing is stored, and the new fuel waiting to be loaded into the reactor.

Reactor building
houses all the equipment needed to allow nuclear power to transform water into steam through steam generators. This is called the “primary” circuit. The steam is sent to the turbine in the machine room.

Auxiliary nuclear building
houses some circuits that ensure a reactor’s safe operation.

Pumping station
collects the sea or river water used to cool part of the circuits.

Condenser
At the turbine outlet, the steam from the cooling circuit is transformed back into water by means of a condenser containing cold water from the sea or a river. The cold water withdrawn from the environment never comes into contact with other water circuits. This is called the “cooling” circuit.

Transformer
raises the voltage of the electricity generated by the alternator so that it can be transmitted through very high voltage lines.

Machine room
houses the turbo-alternator generator that uses the steam produced in the reactor building by the steam generators. This steam rotates a turbine that drives a generator. The generator produces the electricity.
The outages cycle of nuclear reactors

- **900MW**: 28 reactors 12 months cycle
- **4 reactors** 18 months cycle
- **1,300MW**: 20 reactors 18 months cycle
- **1,450MW**: 4 reactors 18 months cycle

Types of planned outages

- Two types of planned outages are alternated at the end of each generation campaign:
  - Ordinary outage for refueling only (PWR): mainly unloading spent fuel and refueling fresh fuel. **Standard period ~40 days** (1)
  - Partial inspection: refueling and maintenance **Standard period ~85 days** (1), varying according to programs for maintenance work
- 10-year inspections: **standard period ~180 days** (1), varying according to programs for safety upgrades and maintenance work
  - Detailed examination of the main components relating to the safety of the facility (reactor vessel, containment building) and realisation of the upgrades aimed to reinforce the safety level of the facility

(1) In February 2020, EDF revised upwards its forecast outage durations to take into account the industrial reality observed over the 2016-2019 period
**Did you know?**

The **Kd**, or “availability factor”, represents the available energy over the maximum theoretical energy corresponding to the maximum capacity all along the year. The winter **Kd** is the availability factor measured between the 1st of December and the 14th of February of the next year, when the consumption reaches its maximum levels.

The **Ku**, or “utilisation factor”, is the produced energy over the available energy. It reflects environmental, social and regulatory constraints, the consumption profile of customers, the supply of system services and the optimisation.

\[ K_p = K_d \times K_u \]

The multiplication of the **Kd** and the **Ku** leads to the **Kp**, or “load factor”, defined as the generated energy compared to the maximum theoretical energy.

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(1) Excluding the outages for regulatory reasons such as outages relating to the irregularities found at Creusot factory, that are included in Ku factor

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(*) from 1st December (N) to 14 February (N+1)
CHANGE IN LOAD FACTOR AND NUCLEAR OUTPUT IN FRANCE

Annual load factor of nuclear fleet in France

Load factor (%)

Net output of PWR (1) fleet in France

TWh

(1) Pressurized Water Reactor
EXISTING NUCLEAR FLEET AND THE **GRAND CARÉNAGE** PROGRAMME

**INDUSTRIAL STRATEGY**

Industrial strategy to continue the operation of plants after 40 years:
- Technical capacity of the plants to operate beyond 40 years supported by international benchmarks for similar technologies
- Extension from 40 to 50 years of the depreciation period of the 900MW nuclear fleet (except Fessenheim) from 1 January 2016: 5 reactors successfully completed their 4th ten-year inspection and thus passed the 40-year milestone (Tricastin 1, Tricastin 2, Bugey 2 and Bugey 4 et Dampierre 1) and 2 ten-year inspection are ongoing (Bugey 5 and Gravelines 1)
- Extension from 40 to 50 years of the depreciation period for the 1,300MW nuclear fleet from 1 January 2021, following in particular, the ASN’s decision of 23 February 2021 on the conditions for continued operation of the 900MW reactors for the ten years following their fourth 10-year inspection and the success of the first 4th ten-year inspection on Tricastin 1
- Strategy compatible with multi-year energy programme for France (PPE)

**“GRAND CARÉNAGE” PROGRAMME**

- Programme integrating the quasi totality of the investments in the existing nuclear fleet over the 2014-2025 period, and beyond
- The estimated cost of the programme is regularly updated. In 2015, initial investment programme on the 2014-2025 period was estimated at €55bn (1) and was optimised and revised to €45bn (€48.2bn in current euros) in 2018. In 2020 (2), EDF has adjusted the costs of the programme to €49.4bn (€48.2bn in current euros).
- To date, the cost stands at €50.2bn in current euros including the new requirements (excluding repair work that could become necessary in respect of the stress corrosion phenomena (3))
- The new roadmap of the “Grand Carénage” project beyond 2025, taking into account in particular the costs related to the fifth 10-year inspection of the 900MW nuclear fleet, is in progress

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(1) The figures presented by the French Cour des comptes in its report of 10 February 2016 cover a longer time horizon, up to 2030, and included, beyond the investment, operating and maintenance expenses. Both assessments are consistent, as stated by the Cour des comptes in its report. Indeed, among the overall estimates calculated by the Cour des comptes and amounting to close to €100 billion for the 2014-2030 period, the investment-expenditures estimated at €74.73 billion should be distinguished from the operating expenditures estimated at €25.16 billion. Within the €74.73 billion of investment expenses between 2014 and 2030, €55 billion are dedicated to the 2014-2025 period, which allows the two estimates established by the EDF group and the Cour des comptes to be connected

(2) See press release of the 29 October 2020

(3) See press release of the 15/12/2021, 13/01/2022 and 07/02/2022
As a major industrial program, Grand carénage incorporates all the investments made by EDF on its French nuclear fleet. It is now made up of 16 active projects.

Each project covers the design and construction phases of all EDF nuclear power plants.
## SOME LARGE PROJECTS 2021

### Fourth ten-year visit 900
Five fourth ten-year visit outages in 2021, with no major incidents relating to fourth ten-year visit works: Bugey 4 was coupled to the grid on 24/06/2021, Tricastin 2 on 26/07/2021 and Dampierre 1 on 05/02/2022. The outages of the fourth ten-year visits of Bugey 5 and Gravelines 1, launched in 2021, continued in 2022.

The pace of five fourth ten-year visits per year will continue in 2022 (GRA3, TRI3, DAMZ, BLA1, SLB2): the activities completed ahead of time in 2021 to prepare for these five fourth ten-year visits advanced in line with the schedule.

### Third ten-year visit 1300
The third ten-year visit of Cattenom 3 was completed on 03/09/2021 with difficulties regarding the modification of the turbine command control.

The third ten-year visit of Penly 1 was also initiated in 2021.

Closure of the third regular re-examination 1300: ASN sent the letter on the closure of the general phase of the third regular 1300 re-examination to EDF on 07/07/2021. It included 16 additional requests.

### Second ten-year visit N4
Start of the outage for the second ten-year visit of Civaux 1 on 21/08/2021. A total of 43 modifications will be included, mainly concerning command control, six of which in TTS. 97% of the TEM works were completed before the unit was decoupled.

### MRI
Compliance with regulatory deadline of 03/12/2021 on the removal of ionic detectors from all industrial and tertiary buildings at all nuclear power plants.

### UWS
At end-2021, 56 out of 56 units were equipped with an “ultimate water source”, either with a long-term solution or a temporary solution (37). The long-term solutions will be rolled out in 2022 and 2023.

### Steam generator
- Replacement of SGs at Gravelines 6: last replacement SG assembly phase completed on 20 February 2022
- Flamanville 1: Arrival on site of the replacement SGs for the RGV of Flamanville 1 2022
- Completion of the preventive cleaning of the 3 SGs in 2021 and qualification of new Framatome procedure for preventive cleaning.

### Cooling source
The rotating drum screens at Tricastin 2, Penly 1 and Gravelines 1 were replaced on schedule.

### Civil engineering
POCO Extrados project at Cattenom 3: the use of an access structure specifically designed and implemented to place 2,000 m² of cladding on the dome served to secure production rates by optimising phasing and to ensure optimal production quality and thus substantially improve dome sealing.

### PRS
The first biometric gate was successfully installed at the Flamanville site.
In 2029, series 900: Tricastin 1 will be the first reactor to realise its 5th 10-year inspection.

NB: forecast data on 31 December 2021.
EXTENSION OF AMORTISATION PERIOD FOR 1,300MW NUCLEAR FLEET

The Group considers that all the technical, economic and governance conditions for bringing the depreciation period of 1300MW-series PWR plants in France in line with its industrial strategy were fulfilled during 2021.

The Group has a sufficient level of assurance the technical capacity of the 1300MW plants' to operate for at least 50 years. This is also confirmed by the international benchmark.

The ASN decision published in February 2021 for the generic aspects of the conditions for continued operation of the 900MW reactors for a ten years following their fourth 10-year inspection, and the industrial success of the initial fourth 10-year inspection for such reactors of the 900MW nuclear fleet (1) reinforce EDF’s confidence that its inspection content for 1,300MW series is appropriate and well controlled. Once its fourth 10-year inspections are completed, the 1,300MW PWR plants will thus have reached a level of safety similar to EPR safety level.

Also, extending operation of the 1,300MW-series plants beyond 40 years offers high profitability even in low long-term price scenarios, and in a range of sensitivity scenarios.

Finally, operating the 1,300MW-series plants for 50 years is consistent with France’s Energy and Climate law of 8 November 2019 and the adoption decree of 21 April 2020 for France’s multi-year energy plan (*Programmation Pluriannuelle de l’Energie* (PPE)).

The Group considers that the best estimate for the depreciation period of the 1,300MWe-series plants is now 50 years. This change in accounting estimate is independent of the ASN's decisions to authorize conditions for continued operation. In compliance with the law, such authorisations will be given by the ASN individually for each unit after each 10-year inspection.

The Group therefore changed the accounting estimate at 1 January 2021 for all 1,300MW power plants.

This change of accounting estimate, which is applied on a prospective basis, essentially results in reduced asset depreciation expenses and costs to unwind the discount on provisions in the Group's financial statements.

<table>
<thead>
<tr>
<th>Description</th>
<th>06/30/2021</th>
<th>12/31/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net depreciation and amortisation and discount</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income before taxes of consolidated companies</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Net income -- Group share</td>
<td>0.2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

At 1 January 2021, provisions relating to nuclear power generation were reduced by €1bn, including €0.8bn covered by dedicated assets. This reduction generated a tax payment of €184 million.

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(1) See p87 "Existing nuclear fleet and Grand Carénage programme"
THE PLANT DISMANTLING CYCLE: 3 KEY STEPS

Final shutdown
- The first phase consists in unloading the fuel and draining all systems (after which 99.9% of the on-site radioactivity has been eliminated), followed by decommissioning (dismantling of decommissioned non-nuclear installations)

Dismantling excluding the reactor building
- The second phase starts after the obtaining of the dismantling decree and consists in dismantling all equipment and buildings (with the exception of the reactor building), as well as the packing and removing of all waste to appropriate storage facilities

Dismantling of the reactor building
- This final phase corresponds to dismantling of the reactor vessel, the demolition of the buildings and the soil remediation

The duration of a Pressurised Water Reactor (PWR) dismantling is 15 years starting from the dismantling decree. The duration of the operations may vary for other technologies (NUGG, LWR, FNR) according to the complexity of works that have to be completed
DISMANTLING: A NORMAL STEP IN THE LIFE OF A PLANT

3 periods in the life of a plant
Construction - Operation - Dismantling

As the operator of the nuclear plants, EDF is in charge of these three steps and is currently dismantling first generation nuclear plants (shut down up to the 1990s) and prepares the dismantling of the two reactors of Fessenheim.

11 REACTORS UNDER DISMANTLING IN FRANCE
4 DIFFERENT TECHNOLOGIES
7 INDUSTRIAL SITES

The nuclear plants currently in operation are all “Pressurized Water Reactors” (PWR)
PREPARATION OF THE DECOMMISSIONING OF THE 2 FESSENHEIM REACTORS

Commissioned in 1977, the 2 reactors of FESSENHEIM were shut down in February and June 2020. In December 2020, EDF submitted its decommissioning file including an environmental impact assessment and a safety demonstration. The dismantling decree authorising the start of dismantling work of the plant is expected in 2025, after the ASN investigation.

- 2019: Declaration by EDF of the ultimate shut down
- 2020: Shut down of the 2 reactors of Fessenheim
- 2020-2025: Preliminary works for the dismantling, defueling
- 2025-2034: Electro-mechanical dismantling, start of the decontamination
- 2034-2039: End of the decontamination, conventional demolition of the buildings, remediation of soils
- 2040: End of the dismantling, decommissioning of the Basic Nuclear Facility
STAGES OF THE NUCLEAR FUEL CYCLE IN FRANCE
### RADIOACTIVE WASTE MANAGEMENT (1/2)

<table>
<thead>
<tr>
<th>TYPE OF WASTE</th>
<th>EXAMPLE</th>
<th>POSITION/STORAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY-LOW-LEVEL WASTE (VLLW)</td>
<td>Waste resulting from the maintenance work and decommissioning of nuclear installations (concrete, scrap, piping, work clothes, ...)</td>
<td>On the surface at the Morvilliers storage centre managed by ANDRA (1)</td>
</tr>
<tr>
<td>SHORT-LIVED INTERMEDIATE- AND LOW-LEVEL WASTE (SL-ILW and LLW)</td>
<td>Waste from the processing of liquid and gaseous effluents of operating plants; some decommissioning waste</td>
<td>On the surface at the Soulaines storage centre, managed by ANDRA (1)</td>
</tr>
<tr>
<td>LONG-LIVED, LOW-LEVEL WASTE (LL-LLW)</td>
<td>They essentially are graphite waste from the dismantling of first-generation plants</td>
<td>Warehousing at the production site pending the construction of a storage centre. Storage project under review.</td>
</tr>
<tr>
<td>LONG-LIVED INTERMEDIATE-LEVEL WASTE (LL-ILW)</td>
<td>Metallic structures of the fuel assemblies, other operating or dismantling waste near the core of the reactor</td>
<td>Once the fuel is removed, the metallic structures enclosing the fuel are warehoused at the plant in The Hague. Operational and dismantling waste close to the core are sent to ICEDA since October 2020 (commissioning), pending the geological storage industrial centre (Cigéo)(2)</td>
</tr>
<tr>
<td>HIGH-LEVEL WASTE (HLW)</td>
<td>Waste from the processing of spent fuel</td>
<td>Warehousing at the Orano site in The Hague pending the geological storage industrial centre (Cigéo)(2).</td>
</tr>
</tbody>
</table>

(1) National Agency for Radioactive Waste Management (Agence Nationale pour la Gestion des Déchets Radioactifs)
(2) For more information about Cigéo, please see p.108
RADIOACTIVE WASTE MANAGEMENT (2/2)
100% OF RADIOACTIVE WASTE IS MANAGED IN OPERATIONAL AND SAFE STRUCTURES

Sorting

- Metallic waste
- Incinerable waste
- Other short-lived waste

Treatment / Packaging

- Fusion
- Incineration
- Packaging
- Compaction
- Vitrification

Storage

- Short-lived waste
- Long-lived waste

- CIRES
- CSA
- ICEDA
- LA HAGUE

MAIN BUSINESSES

NUCLEAR

EDF

2021 FACTS & FIGURES
CIGÉO – A DEEP-STORAGE INDUSTRIAL CENTRE

- French deep-storage project for Long-lived Intermediate-level and High-level radioactive waste, generated mainly by the existing French nuclear facilities (nuclear power industry, research, defense, etc.). Such waste represents 3% of the total volume of radioactive waste and is alone responsible for 99% of waste radioactivity.
- The French law of 28 June 2006 tasked the National Agency for Radioactive Waste Management (ANDRA) with designing, constructing and operating Cigéo.
- The authorisation request of the Cigéo creation will be submitted in Q3 2022. It plans the site to be located in eastern France, on the border between the Meuse and Haute-Marne, near the ANDRA underground laboratory (Bure).

**The principle of reversible storage in deep geological layers**

- Principle adopted by the French Law of 28 June 2006 as the only safe solution for the long-term management of this type of waste, without shifting the burden onto future generations. This choice was preceded by 15 years of research, assessments (including the National Review Board and the Nuclear Safety Authority) and a public debate.
- The principle of reversibility for the entire duration of the operation (at least 100 years) in order to adapt Cigéo to possible changes.

**Secure and robust facilities that are adaptable on two levels**

- On the surface: facilities to receive and prepare waste shipments, and to undertake excavation work and the progressive construction of underground structures.
- Below ground: galleries located about 500 meters deep in a stable and impermeable layer of argillaceous rock, chosen for its containment properties over very long periods.
- Scalable architecture of the underground facilities during operation, depending on feedback and available technologies.

Cigéo facilities on the surface

Cigéo underground galleries modelisation
The Group of subsidiaries “Cyclife” was created to centralise the Group’s activities on nuclear decommissioning and waste treatment for the French and international market.

The Group consists of several entities or subsidiaries.

- **UK (Workington)**
  - Smelting (1): 3,000t/year
  - Incineration (1): 120 employees

- **Sweden (Nyköping)**
  - Smelting (1): 5,000t/year
  - Incineration (1): 500t/year
  - Pyrolysis (1): 50t/year
  - ~100 employees

- **France (Codolet)**
  - Smelting (1): 3,500t/year
  - Incineration (1): 6,000t/year
  - ~300 employees

---

(1) Maximum authorised capacities
EDF ENERGY NUCLEAR FLEET

HIGHLIGHTS

➢ Generated approximately **15% of UK output in 2021** (1)
➢ 7 nuclear power stations
➢ 13 reactors in operation
➢ 2 technologies (AGR and PWR), with total capacity of **7.8GW** (2)

Did you know ?

**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 helping to control the reaction. The reactor is encased in a steel-lined pre-stressed 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 dioxide encased in a stainless steel pin for its fuel and CO₂ as its coolant.

**A PWR** is contained inside a steel pressure vessel filled with pressurised water which acts as the moderator and coolant. The fuel used is enriched uranium dioxide and is contained in zirconium alloy tubes.

(1) 100% EDF Energy Nuclear Generation output out of total UK Generation as per WMO estimate
(2) At 31 December 2021, Dungeness B and Hunterston B Reactor 3 had been moved to defuelling operations and the capacity of the generating reactors became 7.3GW. (It does not include the closure of Hunterston B Reactor 4 in January 2022)
KEY CHARACTERISTICS OF EDF ENERGY’S NUCLEAR FLEET

- A nuclear fleet with an average age of 37 years
  - Total power generation capacity of 7.8GW
  - An output of 41.7TWh in 2021

- Nuclear safety is the over-riding priority
  - Adequacy of each station confirmed at each statutory outage by the Office for Nuclear Regulation (ONR) that has to provide consent to restart after each outage
  - Periodic safety review (PSR) undertaken every 10 years, also requiring ONR acceptance

- Expected lifetime
  - It is anticipated that Sizewell B PWR can be extended by 20 years
  - Power generation was formally ended at Dungeness B on 7 June 2021 and at Hunterston B on 7 January 2022
  - The decision has been taken to end power generation at Hinkley Point B no later than 15 July 2022
  - The expected end of power generation for Hartlepool & Heysham 1 is March 2024 and for Heysham 2 & Torness is March 2028 (2 years shorter than the original lifetime)

(1) Unit Capability Factor
(2) Average age of AGRs is 39 years and age of SZB is 27 years. Accounting useful life of SZB has been extended by 20 years with formal approval to take place in 2024.
(3) For more information about EDF Energy’s nuclear fleet and about the AGR and PWR technologies, see p. 110
EDF GROUP MAIN BUSINESSES

➢ NUCLEAR P. 77
➢ RENEWABLES P. 112
➢ THERMAL POWER P. 133
➢ REGULATED ACTIVITIES (NETWORKS) P. 136
➢ OPTIMISATION & TRADING P. 150
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➢ ENERGY SERVICES P. 181
➢ GAS P. 188
EDF, THE EUROPEAN LEADER IN RENEWABLE ENERGIES

NET INSTALLED CAPACITY: 34.8GW (1)

A DIVERSIFIED MIX WITH 34.8GW IN OPERATION
- 22.5GW of hydropower
- 12.0GW of wind and solar power
- 0.2GW others (biomass, geothermal, …)

HYDROPOWER
- Leading European producer of hydropower
- More than 400 production sites worldwide

A GLOBAL LEADER IN WIND AND SOLAR ENERGY
- 3.1GW gross commissioned in 2021
- 7.9GW gross currently under construction (1.5GW in onshore wind power, 1.9GW in offshore wind power, 4.5GW in solar power)

NB: situation at 31/12/2021
(1) Installed capacity shown as net, corresponding to the consolidated data based on EDF’s participation in Group companies, including investments in affiliates and joint ventures
(2) Including sea energy: 0.24GW
## RENEWABLE OUTPUT

Output from fully consolidated entities

<table>
<thead>
<tr>
<th>(in TWh)</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydro (1)</strong></td>
<td>49.4</td>
<td>46.2</td>
</tr>
<tr>
<td></td>
<td>72 %</td>
<td>69 %</td>
</tr>
<tr>
<td><strong>Wind</strong></td>
<td>17.2</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td>25 %</td>
<td>27 %</td>
</tr>
<tr>
<td><strong>Solar</strong></td>
<td>1.2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>2 %</td>
<td>3 %</td>
</tr>
<tr>
<td><strong>Biomass</strong></td>
<td>1.0</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>1 %</td>
<td>1 %</td>
</tr>
<tr>
<td><strong>Total electricity Group</strong></td>
<td>68.7</td>
<td>67.1</td>
</tr>
<tr>
<td></td>
<td>100 %</td>
<td>100 %</td>
</tr>
<tr>
<td><strong>Total heat Group</strong></td>
<td>8.6</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td>100 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

NB: The values correspond to the expression to the first decimal or integer closest to the sum of the precise values, taking into account rounding.

(1) Hydro output includes tidal energy for 540GWh in 2020 and 543GWh in 2021. Hydro output after deduction of pumped volumes is 43.2TWh in 2020 and 40.3TWh in 2021.
FRENCH HYDROPOWER – A DIVERSIFIED & FLEXIBLE FLEET

THE MAIN SOURCE OF RENEWABLE POWER IN FRANCE

Net Renewable installed capacity (1)
of the Group in France

- Hydro & marine: 22.5GW
- Other Renewables: 12.3GW
- Total: 34.8GW

- 427 plants in France (mainland), average age of 76 years
- Covering the different kinds of hydropower facilities:
  - Run-of-river / Pondage water / Reservoirs (lake-supplied) / Pumped storage / Tidal power

UNIQUE STORAGE VALUE, CRITICAL FOR THE ELECTRICITY SYSTEM

Estimated weekly flexibility needs (2)

- Allows quick adjustments to within-day fluctuations in the supply-demand balance
  - Consumption peaks
  - Non forecasted loss of generation capacity
- Hydropower is the most significant contributor to ancillary services

AMONG THE MOST FLEXIBLE AND REACTIVE GENERATION MEANS

Response time to reach full capacity of plants

- ~10 minutes

- Hydropower France provides ~14GW of storage
  - Reservoirs: 8.1GW
  - Pumped storage: 5.0GW
    - Including the 1.8GW Grand’Maison facility, the largest European storage asset
- Only sizeable & cost competitive electricity storage technology

(1) Power generation capacity, in proportion of the share the EDF group held in each asset
(2) Source: RTE (Bilan prévisionnel)
DIFFERENT TYPES OF HYDROPOWER FACILITIES

EDF disposes of numerous hydropower facilities, able to meet base-load and peak demand, designed to optimise the use of water resources

➢ Run-of-river
  • No storage capacity
  • Energy generation depends solely on the current water condition

➢ Pondage water
  • Average sized water reserve, intended for an occasional use during the week or the day
  • Generation is concentrated at peak hours

➢ Reservoirs
  • Large storage capacity
  • Influence on downstream power plants (located in mountain ranges) which calls for a management of valley stations

➢ Pumped storage
  • Massive energy storage
  • Water is pumped from a downstream reservoir to an upstream one to create a reserve available during peak-low hours
  • Water is then turbined from the upstream reservoir to the downstream one during periods of high demand

➢ Tidal power
  • The tidal power plant of the Rance river uses the tides and sea currents to power the turbines and thus generate electricity (renewable)
EDF’S HYDROPOWER FLEET IN MAINLAND FRANCE

Turbine capacity in GW

- Pumped storage (2): 5GW
  - Tidal: 240MW (1%)
  - Pondage water: 3.1GW (15%)
- Reservoirs: 8.2GW (41%)
- Run-of-river: 3.6GW (18%)
- ~ 20.1GW

Average producible in 50 years (1)

- Pumped storage: 1.5TWh
  - Tidal: 0.5TWh (1%)
  - Pondage water: 1.5TWh (4%)
- Reservoirs: 14.5TWh (35%)
- Run-of-river: 16.7TWh (40%)
- ~ 41.3TWh

Circa 23% of the EDF’s fleet installed capacity in France
Circa 11.5% of the average EDF output in France

(1) The average production over 50 years has been re-evaluated on the basis of observed climate change
(2) Only gravity capacity is counted in the Pumped storage; pumped energy is not taken into account
FRANCE HYDRO OUTPUT IN MAINLAND FRANCE

- 2020 cumulative output (1)
- 2021 cumulative output (1)

1989: 30.5TWh lowest potential hydropower capacity in the last 30 years
1994: 53.2TWh highest potential hydropower capacity in the last 30 years

Hydro conditions in 2021 slightly lower than 2020
Hydraulic reservoirs filling rate in France at 61.7% at end-December 2021: -1.9 points vs historical average

(1) Hydropower excluding electrical activities on French islands, before deduction of pumped volume consumption.
(2) Production after deduction of pumped volume consumption: 38.5TWh in 2020, and 35.6TWh in 2021
DEVELOP HYDROPOWER IN FRANCE AND ABROAD

EDF operates 80% of mainland France’s hydropower potential and 66% of hydroelectricity energy output. EDF is committed to developing its hydropower activities in order to increase their power and availability. EDF’s expertise is also recognised internationally.

➢ FRANCE

- Improving the performance of the existing generation fleet. Examples: supplementary power projects Hermillon plant (Savoie) and in Montahut (Hérault).
- Developing small hydropower facilities. Examples: Bessans (Savoie) and Naves (Savoie), with works soon to begin.
- Developing storage with PSHP (pumped storage hydropower plants): EDF is reviewing several PSHP projects based on existing plants or new plants.
- Promoting complementarity with intermittent renewable energies. Example: in Lazer (Hautes-Alpes), EDF achieved a first in France by using the surface of a hydropower dam reservoir for a floating photovoltaic project.

➢ BIODIVERSITY

- Rhine: launch of studies on works for fish bypass systems at the hydropower plants of Rhinau and Marckolsheim. This operation is funded by the France Relance recovery plan and the European Union for a maximum €80m.
- Poutès: The new dam at Poutès has been built. It is the result of ongoing dialogue with stakeholders to strike a balance between renewable energy output and the protection of Atlantic salmon, which can now freely access their reproduction sites in the upper valley of the Allier.

➢ INTERNATIONAL

- Developing engineering and operating service offers internationally.
- Nachtigal (Cameroon): construction of a 420MW dam (see p.120).
- Hatta (UAE): continuation of PSHP project.
NACHTIGAL HYDROELECTRIC DAM IN CAMEROON (1)

MAIN ASPECTS OF THE PROJECT

- Design, construction and operation for a period of 35 years of a 420MW run-of-the-river hydropower plant on the Sanaga river near the Nachtigal Falls
- Construction of a 50-km power transmission line
- Project will be owned and operated by NHPC (Nachtigal Hydro Power Company), established since December 2018, currently comprising EDF (40%) (2), IFC (20%), the Republic of Cameroon (15%), Africa50 (15%) and STOA (10%)
- Expected annual power generation of 3TWh, which will cover 30% of the energy needs of the country
- Substantial economic benefits: up to 3,000 direct jobs during peak construction periods, of which 65% will be locally sourced within a 65km radius of the construction site. The project will generate dozens of permanent jobs

FINANCING STRUCTURE

- Project’s expected total cost: €1.2 billion
- Shareholders’ equity to fund a quarter of the project, lenders to fund the rest
- The lender group includes 11 Development Finance Institutions (DFI) and 4 local commercial banks (3)
- The largest hydropower project ever built in Africa through non-recourse project finance debt

TIMELINE

- Final and binding agreements signed on 8 November 2018, financial closing on 24 December 2018
- Start of construction in March 2019, 53% of civil engineering achieved at 31/12/2021
- Construction slowdown: the Covid-19 pandemic and concrete supply and production difficulties have led to an estimated 10-month delay in operational commissioning, now planned for summer 2024

(1) Refer to the press release published by EDF on 8 November 2018
(2) Equity consolidation method
(3) Including: AfDB, IFC (International Finance Corporation) – member of the World Bank Group, CDC, European DFI coordinated by Proparco (AFD, DEG and FMO), EIB, OFID, EAIF, AFC. Local banks include: Attijari/SCB, BICEC, SG Cameroun and Standard Chartered

420MW run-of-the-river hydropower plant
A PORTFOLIO OF WIND AND SOLAR PROJECTS OF ~ 76GW (1) (1/2)

A PROJECT PORTFOLIO THAT IS DIVERSIFIED GEOGRAPHICALLY...

NB: situation at 31/12/2021
(1) Pipeline excluding capacities under construction. Gross data corresponding to 100% of the capacity of the projects concerned.
A PORTFOLIO OF WIND AND SOLAR PROJECTS OF ~ 76GW (1) (2/2)

PORTFOLIO OF PROJECTS (2) BREAKDOWN BY DEVELOPMENT PHASE (IN GW)

- Secured (***)
- Under development (**)
- Prospection phase (*)

~ 76

27
8
41

76
16
28
32

2022-2023
2024-2026
> 2026

PIPELINE BREAKDOWN BY DATE OF START OF CONSTRUCTION (IN GW) (3)

* Start of land identification and preliminary studies
** Sufficient land securisation and start of technical studies
*** Securing a power purchase agreement (following a call for tenders, auction, OTC negotiation)

NB: situation at 31/12/2021
(1) Pipeline excluding capacities under construction. Gross data corresponding to 100% of the capacity of the projects concerned.
(2) All the projects in prospection phase included in the pipeline, starting 2020
(3) Start of construction portfolio, not probability-based
STRONG GROWTH BASED ON A LARGE PROJECT PORTFOLIO

Net installed capacity\(^{(1)}\) x 1.8 since 2015

\[
\begin{array}{c|c}
\text{2015} & 6.8\text{GW} \\
\text{2021} & 12.0\text{GW} \\
\end{array}
\]

Significant increase in total output\(^{(1)}\)

\[
\begin{array}{c|c}
\text{2015} & 13.5\text{TWh} \\
\text{2021} & 20.9\text{TWh} \\
\end{array}
\]

(1) In GW net. Solar and wind.

2030 Ambitions (including hydro)

\[>X2\]
REVENUE SECURED BY LONG-TERM CONTRACTS

CONTRACTUALISATION OF 2022 CONSOLIDATED REVENUE FROM RENEWABLE GENERATION (1)

- 95% SECURED REVENUE
- 2% MEDIUM TERM HEDGES
- 3% MARKET EXPOSURE

95% OF 2022 REVENUE SECURED
Increased by 6% vs 2021

AVERAGE RESIDUAL DURATION OF LONG TERM CONTRACTS (2)

- 41% 11-15 YEARS
- 13% 16-20 YEARS
- 20% >20 YEARS
- 15% 1-5 YEARS

THE AVERAGE REMAINING TERM OF THE CONTRACTS IS ~13 YEARS

(1) Based on the estimate of 2022 revenues from fully consolidated assets
(2) Weighting according to estimated 2022 revenues of fully consolidated assets
OFFSHORE WIND DEVELOPMENTS IN FRANCE: 5 PROJECTS FOR A TOTAL CAPACITY OF MORE THAN 2GW, INCLUDING ~ 1GW UNDER CONSTRUCTION

ONGOING CONSTRUCTIONS

• **Saint Nazaire offshore wind farm** (started in 2019, expected commissioning in 2022, ~€2bn total investments, partnership with Enbridge)

• **Fécamp offshore wind farm** (started in 2020, expected commissioning in 2023, ~€2bn total investments, partnership with Enbridge and WPD)

Major achievements in 2021

• **Calvados offshore wind farm (Courseulles-sur-Mer)**
  • Start of construction in February 2021
  • Expected commissioning in 2024
  • ~€2bn total investment, partnership with Enbridge and WPD

FURTHER DEVELOPMENTS

• Ongoing development of **Dunkirk offshore wind farm** (~€1bn total investment, partnership with Enbridge)

• Participation in tenders in Normandy in partnership with Enbridge and CPPIB

• Development in progress and preparation of construction of **Provence Grand Large, a floating wind pilot project**: contract awarded to EDF Renewables for the installation of three 8MW turbines on floating foundations off the coast of Fos-sur-mer

• Participation in tenders in South Brittany with Enbridge and CPPIB
INTERNATIONAL OFFSHORE WIND DEVELOPMENTS: NEARLY 4GW IN DEVELOPMENT, 450MW UNDER CONSTRUCTION IN SCOTLAND

Neart Na Gaoithe project in Scotland
- Start of construction in 2019
- Total capacity: 450MW (54 turbines)
- Partnership with the Irish utility ESB at 50%
- Total investment: ~£2bn
- Contract for Difference (CfD) over 15 years (£114/MWh in £2012)

Atlantic Shores project in the United States
- Joint-venture company “Atlantic Shores Offshore Wind” (ASOW) with Shell
- ~750km² Lease Area secured 12-16 km off the shoreline in shallow waters
- Contract awarded in July 2021 by New Jersey Board of Public Utilities to ASOW to develop 1.5GW off New Jersey coasts
- Construction scheduled to begin in 2024
- In March 2022, gain of a new maritime area to develop 1.5GW offshore in the New York bight

Dongtai IV and V projects in China
- Joint-venture with China Energy Renewables, a subsidiary of China Energy Investment Corporation
- Total capacity: 502MW (Dongtai IV: 302MW, Dongtai V: 200MW)
- Commissioning of Dongtai V achieved in 2021 (Dongtai IV commissioned in December 2019)

Gwynt Glas project in Celtic sea
- Equity investment in offshore wind farm project in Celtic sea with DP Energy
- Potential of 1GW (70km off the shorelines) to submit to future tenders

Codling project in Ireland
- Equity investment of 50%
- Project under development in South Dublin, located on 2 adjacent sites
- Irish CfD (“RESS”) auction targeted for 2022
- Total capacity: ~1GW

Blyth 2 project in England
- Floating demonstrator project near the Blyth 1 park (installed, 5 turbines for 42 MW)
- Maximum capacity of 58 MW
- In partnership with Tenaga (investment in 2021 for the entire Blyth project), Malaysian utility
SOUTH AFRICA: EDF RENEWABLES WINS 5 PROJECTS IN 2021 FOR A TOTAL OF c. 850MW (WIND, SOLAR PV, STORAGE)

- **3 wind projects won** by EDF Renewables and its local partners (H1 holdings and Gibb-Crede) with **installed capacities of 140MW each** in the fifth bid window of the REIPPP (1)

- Tender won by EDFR and a local partner to supply solar power to mining company Anglo-American Platinum: project for the construction and operation of a 100MW solar power plant

- Umoyilanga project won in the Risk Mitigation IPP Procurement Programme, **combining solar, wind and battery storage technologies (77MW wind + 138MW solar PV + 75MW storage)**

- Additionally, EDF Renewables commissioned in 2021 the Wesley wind farm (34.5MW), reaching a total of 144MW installed capacity in South Africa

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(1) Renewables Energy Independant Power Producer Procurement
A SUSTAINABLE BUSINESS MODEL BASED ON KEY COMPETITIVE ADVANTAGES

**DEVELOPMENT**

- **Key competitive advantages for the development of a strong project portfolio**
  - A large and diverse international presence with seasoned development teams in Europe and North America and dedicated development hubs in Asia Pacific, Latin America, Middle East and North Africa
  - Expertise in site security, engineering, procurement, structured financial arrangements and participation in tenders
  - Key local partnerships in order to share investments, country risk and maximize competitive advantage
  - Strong portfolio, in renewal and with a good transformation rate
- **Synergies** within EDF group for customer-tailored solution (PPAs for commercial and industrial customers, off-grid or decentralised offers)

**ENGINEERING & CONSTRUCTION**

- **Strong engineering expertise**
- **Significant expertise in the construction of industrial-scale projects and operational excellence in delivering** at budgets and deadlines
- **Continued technical innovation** to seize opportunities in new markets (floating PV, floating offshore wind, etc.)

**O&M AND ASSET MANAGEMENT**

Integrated skills in O&M supporting operational excellence, optimised production, technological expertise

**DECOMMISSIONING**

- Expertise on decommissioning of end-of-life assets
- Proactive approach on blades recycling (partnership with Siemens Gamesa for the deployment of offshore recyclable blades)

---

(1) EDF Renewables Development, Engineering and Construction internal teams. Excluding contractors and partners capabilities

(2) Difference above WACC. Historical average performance estimated as part of a profitability analysis of EDF Renewables projects (scope: 7.5GW net, 126 projects, 15 countries). The IRR calculation takes into consideration the various assumptions (including market prices evolutions)
TECHNOLOGICAL INNOVATION: A KEY COMPETITIVE ADVANTAGE

**PHOTOVOLTAIC SOLAR**
- Increase the capacity of installations thanks to bifacial PV modules
- Unlock new potentials in solar PV in geographically constrained areas thanks to floating photovoltaic solar installations...
  - Ongoing construction of a floating photovoltaic power plant of 20MW in France (Lazer, Hautes-Alpes, expected commissioning in 2022)
- ... and Agri-PV
  - 1st co-developed pilot project with INRA, in operation at EDF R&D center « les Renardières »
  - 45% stakes taken in Green Lighthouse Development (GLHD) a pioneer of agri-PV in France with a pipeline of 2.5GW

**OFFSHORE WIND**
- Exploiting new offshore potential with floating: Provence Grand Large (France, a floating project of 3 x 8.4MW located off the coast of Fos-Sur-Mer), and Blyth II

**STORAGE**
- Development of flexibility on the grid using Li-ion batteries coupled to generation assets: Umoyianga project in South Africa (solar PV and wind) won in 2021, Desert Quartzite in the USA (solar PV) won in 2021, and Maverick 2 (USA) commissioned
- Development of storage projects (in the UK, Pivot Power commissioned 2 storage projects located in Kemsley and Oxford and currently builds 2 projects located in Coventry and Sandwell) and charging systems for electric vehicles (via PowerFlex in the United States)
- Microgrid projects in remote areas: tender won to develop, build and operate around 100MW of photovoltaic capacities, and more than 100MWh of battery energy storage in Iquitos, Peru. Iquitos is the largest city in world not connected to a national power grid, not accessible by roads
~ 17.5GW OF O&M: STRONG EXPERTISE, DIFFERENTIATING FACTOR

17.5 GW of O&M contracts
Remote control and optimisation in real time via a control centre

10 countries

3 technologies (onshore wind, offshore wind, solar PV)

OPTIMISED ASSET PERFORMANCE

- Digitalisation and supervision in real time. Ongoing data lake creation for asset performance optimisation
- Predictive maintenance via algorithms dedicated to anticipate defaults, wear, damage

ENHANCED TECHNICAL EXPERTISE

- Continuous feedback on technical issues via O&M monitoring strengthening knowledge and understanding of industrial technologies
- A strong credibility vis-à-vis turbine manufacturers and third-party investors

REINFORCED COMPETITIVENESS DURING THE DEVELOPMENT PHASES

- More competitive price positioning on tenders
- Contract optimisation thanks to the competition between turbine suppliers for initial or renewal O&M contracts
- Early stage project optimisation (development, construction, etc.)

(1) GW generated by renewable energy power plants that EDF operates and maintains (plant supervision, monitoring of production, preventive and corrective maintenance, etc.) on its own behalf or for a third party
NET CAPACITY INSTALLED AND UNDER CONSTRUCTION - DECEMBER 2021

Legend:
Wind installed (MW)
Solar installed (MW)
Wind and solar under construction (MW)

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross Installed</th>
<th>Net Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Installed capacity</td>
<td>Capacity under construction</td>
</tr>
<tr>
<td></td>
<td>19,005MW</td>
<td>7,885MW</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26,890MW</td>
</tr>
</tbody>
</table>
### INSTALLED CAPACITY AND CAPACITY UNDER CONSTRUCTION, WIND & SOLAR, AS OF 31 DECEMBER 2021

<table>
<thead>
<tr>
<th>(in MW)</th>
<th>Gross (1)</th>
<th>Net (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31/12/2020</td>
<td>31/12/2021</td>
</tr>
<tr>
<td>Wind</td>
<td>12,889</td>
<td>13,606</td>
</tr>
<tr>
<td>Solar</td>
<td>4,254</td>
<td>5,399</td>
</tr>
<tr>
<td><strong>Total installed capacity</strong></td>
<td><strong>17,142</strong></td>
<td><strong>19,005</strong></td>
</tr>
<tr>
<td>Wind under construction</td>
<td>4,126</td>
<td>3,391</td>
</tr>
<tr>
<td>Solar under construction</td>
<td>3,865</td>
<td>4,495</td>
</tr>
<tr>
<td><strong>Total capacity under construction</strong></td>
<td><strong>7,990</strong></td>
<td><strong>7,885</strong></td>
</tr>
</tbody>
</table>

NB: The values correspond to the expression to the first decimal or integer closest to the sum of the precise values, taking into account rounding
(1) Gross capacity: total capacity of the facilities in which EDF Renewables has a stake
(2) Net capacity: capacity corresponding to EDF’s stake
EDF GROUP MAIN BUSINESSES

➢ NUCLEAR P. 77
➢ RENEWABLES P. 112
➢ THERMAL POWER P. 133
➢ REGULATED ACTIVITIES (NETWORKS) P. 136
➢ OPTIMISATION & TRADING P. 150
➢ CUSTOMER SOLUTIONS P. 166
➢ ENERGY SERVICES P. 181
➢ GAS P. 188
Modernisation of the EDF’s fleet in mainland France to improve its technical and environmental performance and to prepare the end of coal-fired power generation

➢ The vast program to modernize EDF’s thermal power plants, which runs from 2007 to 2016, has significantly improved the Group’s carbon footprint. Over the period, the Group carbon intensity in gCO₂/kWh decreased by 32.5%

➢ The Group plans to phase out coal-fired power generation by 2030, in all geographical areas. In France: Closing of the coal-fired powerplant in Le Havre in April 2021 and operation of Cordemais limited in 2022 to 1,000 hours for January and February and 600 hours for the rest of the year.

➢ Commissioning of 4 Combined Cycle Gas Turbines (CCGT) between 2011 and 2016 to replace coal-fired plants that have been shut down

➢ Thermal represents ~ 6% of the EDF group’s installed capacity. The share of thermal in the energy mix of the Group varies from one country to another: in 2021 it reached ~ 3% of electricity generation in France and ~ 70% in Italy

(1) Excluding Corsica and overseas departments, 439MW in 2021 and including tidal generation capacity of 240 MW
(2) Excluding Corsica and overseas departments, 1,567 MW in 2021
(3) Excluding Corsica and overseas departments, 1.3TWh in 2021
(4) Generation including pumped storage consumption
(5) Excluding Corsica and overseas departments, 4.4TWh in 2020
(6) Incl. Le Havre coal power plant, shut down
(7) Decree on 5 February 2022
Source : Universal Registered Document 2021 EDF

Installed capacity in mainland France at end-2021 (in MW)

- Thermal 6%
- Wind 12%
- Hydrower 23%
- Nuclear 71%

Electricity output in mainland France in 2021 (in TWh)

- Thermal 0.02%
- Wind 10.5%
- Hydrower 3%
- Nuclear 87%
EDF THERMAL PLANT FLEET IN MAINLAND FRANCE

Latest figures including the shutdown of the coal-fired power plant in Le Havre in April 2021

- **Coal-fired plants**
  - Two units totalling 1,160MW

- **Combined-Cycle Gas turbines (CCGT)**
  - Four CCGTs totalling 1,950MW

- **Combustion turbines (TAC)**
  - Thirteen TACs totalling 1,850MW

(1) Latest figures including the shutdown of the coal-fired power plant in Le Havre in April 2021
EDF GROUP MAIN BUSINESSES

➢ NUCLEAR P. 77
➢ RENEWABLES P. 112
➢ THERMAL POWER P. 133
➢ REGULATED ACTIVITIES (NETWORKS) P. 136
➢ OPTIMISATION & TRADING P. 150
➢ CUSTOMER SOLUTIONS P. 166
➢ ENERGY SERVICES P. 181
➢ GAS P. 188
## ENEDIS (1): KEY FIGURES

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>December 2020</th>
<th>December 2021</th>
<th>Δ%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>14,211</td>
<td>15,358</td>
<td>+8.1</td>
</tr>
<tr>
<td>EBITDA</td>
<td>4,285</td>
<td>4,994</td>
<td>+16.5</td>
</tr>
<tr>
<td>Net income excl. non-recurrent items</td>
<td>835</td>
<td>1,392</td>
<td>+66.7</td>
</tr>
<tr>
<td>Gross operating investments (2)</td>
<td>3,962</td>
<td>4,379</td>
<td>+10.5</td>
</tr>
</tbody>
</table>

---

(1) Enedis, an independant EDF subsidiary as defined in the French energy code; local data

(2) Including Linky
A REGULATED BUSINESS MODEL IN A SOLE AUTHORIZED STATE CONCESSION OPERATOR MODEL

Regulated activities represent over €6bn annual EBITDA

Breakdown of EBITDA for EDF’s regulated activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>French island activities (1)</td>
<td>15%</td>
</tr>
<tr>
<td>ENEDIS activities</td>
<td>83%</td>
</tr>
</tbody>
</table>

Key assets in France

- The largest distribution grid in Europe
- The main distribution grid in France: connected to 95% of the mainland metropolitan population (the remaining 5% covered by ~170 local distribution companies)
- A regulated business model: ENEDIS has the national monopoly on 360 concession contracts following the gathering during the renewal
- Represents about a quarter of EBITDA, investments and headcount of EDF Group
- Integrated business model including generation, electricity purchases, distribution (via concessions) and supply at the regulated tariff
- Grid activities: similar remuneration to that of Enedis
- Generation activities: for assets commissioned before 06/04/2020, remuneration of 11%. For assets commissioned after 06/04/2020, between 6.25% and 9.75%
- Grid of around 15,000 km (Strasbourg region)
- 575 delivery points
- Around 70% of EBITDA from regulated distribution activities

(1) French island electrical activities include Corsica, Martinique, Guadeloupe, French Guiana, Reunion and Saint Pierre and Miquelon, Saint Barthélémy, Saint Martin and Ponant islands
ENEDIS\(^{(1)}\) : DISTRIBUTION NETWORK LEADER IN EUROPE

MAJOR DISTRIBUTION NETWORK PLAYER IN EUROPE

\(~1.4\text{ M}\) km of lines

\(~37.6\text{ M}\) customers \(^{(2)}\)

\(348\) TWh Distributed \(^{(3)}\)

#1 electricity distribution network in Europe

34 millions
Linky meters
installed at end-2021

540k
of connected
ENR generation
installations
cumulated at end-2021

\(~38,700\)
employees

... in terms of number of customers ...

In millions of delivery points

37
31
22
12
11

Data from operators’ 2019 annual reports

... as in quality of supply

SAIDI – Outage time, excluding exceptional events, in minutes per customer per year

\(66.6\)
\(116.0\)
\(65.8\)
\(23.1\)
\(66.0\)
average

2016 CEER data including transport outage time

\(^{(1)}\) Enedis is an independent EDF subsidiary as defined in the French Energy Code

\(^{(2)}\) Corresponds to the number of delivery points

\(^{(3)}\) Indicator including transport, excluding local distribution companies. The outage time in ENEDIS scope was 57 minutes in 2021

\(^{(4)}\) World’s smartest GRD

\(^{(5)}\) Specific to Germany, whose network is much denser than in other countries
**Enedis** (1) : Top-tier operational performance...

...which means it is frequently awarded the regulatory incentive bonus

The regulatory incentive bonus has been systematically obtained since 2014 (in €m)

- Increase in MIN/MAX from TURPE 5, from €80m for TURPE 4 to €194m for TURPE 5: this increases the remuneration potential in the event of good operational performance.

---

(1) Enedis is an independent EDF subsidiary as defined in the French Energy Code

(2) Excluding exceptional events and transport grid incidents

(3) Provisional data
ENERGY TRANSITION AT THE SERVICE OF THE TERRITORIES

2020-2025 INDUSTRIAL AND HUMAN PROJECT BASED ON EIGHT COMMITMENTS ALIGNED WITH UN OBJECTIVES

- Enabling 100% of customers to monitor their consumption so as to better control it thanks to the smart meter, as well as to benefit from an innovative offer from their supplier.
- Having one of the best value-for-money propositions in Europe
- Halving the time it takes to connect customers by 2022 compared to 2020
- Reconnecting 90% of customers within two days in the event of a major climate incident on the grid

Committed to carbon neutrality

Committed to its employees and partners

Focused on innovation

An ESG champion

- Achieving 70% of the employee commitment index by 2024 (vs 58% in 2019)
- Aiming for zero serious or fatal accidents for teams and service providers
- Creating 20 new activities (energy communities, electric transport solutions, data services, etc.) as part of projects and/or partnerships
- Reducing Enedis’ carbon footprint by 20% by 2025 and achieve carbon neutrality in 2050
- Having one of the best value-for-money propositions in Europe
- Halving the time it takes to connect customers by 2022 compared to 2020
- Reconnecting 90% of customers within two days in the event of a major climate incident on the grid
TARIFF FOR USING THE PUBLIC ELECTRICITY TRANSMISSION AND DISTRIBUTION NETWORKS (TURPE) GENERAL PRINCIPLES

➢ TURPE is based on general principles...
  ● “Postage stamp”: network access pricing is dependent on distance
  ● Tariff equalisation: the same rates apply throughout the national territory
  ● No discrimination: tariffs reflect the costs generated by each category of users
  ● Time-seasonality: tariffs are designed to encourage customers to limit their consumption during peak periods

➢ ... complemented by criteria to best meet the expectations of stakeholders
  ● Efficiency: the tariff signal leads users to modify their behaviour and encourages the reduction of costs over the long term
  ● Readability: level of complexity appropriate to the type of user and the voltage level considered
  ● Feasibility: tariffs must be able to be implemented
  ● Progressivity: a change in tariffs must generate progressive effects
ENEDIS: TURPE 6, A MATURE REGULATORY FRAMEWORK

Key elements of the remuneration: a cost + remuneration approach  
(2021 theoretical figures from the CRE deliberation of January 2021)

- Net revenue excluding transport
- Power system charges = transport purchase from RTE + purchase of network losses
- CRCP = expense and income adjustment account; CRL Linky = Linky regulated levelling account (Compte Régulé de Lissage [CRL])
- French standard data. The difference with IFRS mainly corresponds to Enedis’ contribution to the Electricity Equalization Fund
- Capital costs + operating charges + electric system charges
- Incentive regulation: productivity gains, quality of service and continuity of supply, R&D and smart grids

Tariff indexation principle (TURPE 6)

Change in the consumer price index (criteria: inflation)
Inflation rate for the year + 0.31%
Calculating the k factor (5) capped at +/-2%

CRCP balance (3): difference for non-controllable expenditure between forecast and actual + incentive regulation

No exposure to variations in distributed volumes (number of customers, TWh distributed including weather impact) vs trajectory defined by the regulator

Income and expense (6) largely secured by the mechanism of the Income and Expense Adjustment Account (CRCP):

- % of revenues covered by the CRCP
- % of expenses covered by the CRCP

(1) Net revenue excluding transport
(2) Power system charges = transport purchase from RTE + purchase of network losses
(3) CRCP = expense and income adjustment account; CRL Linky = Linky regulated levelling account (Compte Régulé de Lissage [CRL])
(4) French standard data. The difference with IFRS mainly corresponds to Enedis’ contribution to the Electricity Equalization Fund
(5) k factor = percentage change in the fee table resulting from the clearance of the CRCP balance
(6) Capital charges + operating charges + electric system charges
A remuneration mechanism based on a guaranteed return

**ENEDIS remuneration structure in 2020 according to the TURPE 6**

### RAB

**Enedis excl. Linky (€53.7bn)**

- **Asset margin** = Asset beta x Market risk premium / (1 - tax rate) = 0.36 x 5% / (1 – 26.47%) = 2.5%

### RE

**Regulated Equity (€8.8bn)**

- **Additional rate of remuneration applied to RE** = Risk-free rate / (1 - Tax rate) = 1.7% / (1 – 26.47%) = 2.3%

### Linky RAB

**Linky RAB (€2.7bn)**

- **Remuneration rate for Linky assets** = Base rate + expected remuneration bonus = 7.25% + 3% = 10.25%

### 2021 REGULATED EBIT

**TURPE 6 in continuity with the previous TURPE**

- Return on capital depends little on interest rate trends: stable at 2.5% since TURPE 4
- Return on regulated equity: decrease from 4 to 2.3% to take into account the reduction of the risk-free rate and the corporate tax rate in France
- CRCP: mechanism globally validated. The entry CRCP of TURPE 6 represents a receivable of €588m (6) to be spread over the 4 years of TURPE 6
- Incentive regulation: targets raised, notably quality of service
- Main new features: annual tariff indexation includes 0.31% remuneration above inflation.

---

*01/01/2021 figures*

(1) Asset margin = Asset beta x Market risk premium / (1 - tax rate) = 0.36 x 5% / (1 – 26.47%) = 2.5%

(2) Additional rate of remuneration applied to RE = Risk-free rate / (1 - Tax rate) = 1.7% / (1 – 26.47%) = 2.3%

(3) Remuneration rate for Linky assets = Base rate + expected remuneration bonus = 7.25% + 3% = 10.25%

(4) Assuming award of the expected remuneration bonus

(5) Applicable from 1 August 2021

(6) CRE deliberation
STEADY GROWTH IN RAB AND REGULATORY EQUITY

Annual change in RAB

- **RAB at 01/01/2020**: 52.2
- **CAPEX commissioned**: 44
- **Assets allowances (1)**: 48
- **RAB D&A**: 52
- **Asset exits**: 56
- **RAB at 01/01/2021**: 53.7
- **RAB at 01/01/2024**: 57.5

**2.3% CAGR 2021-24**

Annual change in RE

- **Regulated equity at 01/01/2020**: 8.3
- **CAPEX commissioned**: 10
- **Regulated equity D&As**: 12
- **Others**: 0
- **Regulated equity at 01/01/2021**: 8.8
- **Regulated equity at 01/01/2024**: 10.7

**+6.8% CAGR 2021-24**

(1) Work by concession-granting authorities and transferred to Enedis + c.€0.4bn for the integration of growing columns excluding concession in 2020 (ELAN law)

(2) Estimated figures from the CRE deliberation
LINKY (1) : AN INCENTIVISING TARIFF FRAMEWORK

34m customers equipped at end-2021

Target achieved

3% Additional premium (4) → Almost secured

7.25% Nominal rate of return on assets before tax

AN ATTRACTIVE REMUNERATION STAGGERED OVER TIME

2014-2021 Investment pattern in €bn


0.1 0.1 0.3 0.6 0.8 0.8 0.7 0.5

~€3.9bn (2) investments over 2014-2021

Specific regulation over 20 years (Linky-dedicated RAB)

MAIN BUSINESSES REGULATED

(1) Linky is a project led by Enedis, an independent EDF subsidiary as defined in the French Energy Code
(2) Program costs are lower than the initial budget, planned at €4.7bn
(3) Additional premium of 3% / Penalties of -2%, depending on the respect of costs, deadlines and performance of the system during the deployment phase
Linky’s cash flow is negatively impacted until 2021 as a result of the roll-out and the Regulated Deferred Account mechanism (CRL).

Significant contribution from 2022 before peaking around 2025-2027
ISLAND ACTIVITIES (1): SPECIFIC REGULATION AND OPERATIONAL PERFORMANCE SUPPORTING STABLE REVENUES

### MAJOR ASSETS AT THE HEART OF THE TERRITORIES
- c.3,500 employees
- 1.2 million customers
- ~37,000 km of grid
- 6,118 GWh of generation

### REGULATED ASSETS, OPERATED EFFICIENTLY, GENERATING A STABLE EBITDA

**Generation assets**: 11% remuneration for assets commissioned between 2006 and April 2020 (7.25% before) and then between 6.25% and 9.75% remuneration for assets commissioned in function of technologies and territories, excluding specific project

**Networks**: (FPE (3))
- 4.8% return on regulated equity (€0.9bn)
- 2.5% remuneration on the RAB (€2.6bn)

### A CONTRIBUTION TO THE ENERGY TRANSITION IN ZNI (2)

**Smart meter programme**: install and operate 1.2 million smart meters by end 2024. Around 715k smart meters were already installed and operated by the end of 2021: roll-out on schedule.

**Energy efficiency**: sustainable energy-saving measures (insulation, solar water heaters, etc.)

**Decarbonation**: integration of renewable energy sources, development and operation of ~30 smart grids, electrification programme in isolated areas. Conversion to liquid biomass of the power plants operating in Port Est, Pointe Jarry and Bellefontaine, as well as the future Larivot plant.

### EDF PEI availability rate as a %

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>96.3</td>
</tr>
<tr>
<td>2018</td>
<td>95.2</td>
</tr>
<tr>
<td>2019</td>
<td>96.2</td>
</tr>
<tr>
<td>2020</td>
<td>96.3</td>
</tr>
<tr>
<td>2021</td>
<td>96.0</td>
</tr>
</tbody>
</table>

### Normalised EBITDA *

- Range of €780M / year **

* Restated for the effect of the regularisation account (4)
** o/w about a third related to grid activity, and excluding regularisation account

---

(1) French island electrical activities include Corsica, Martinique, Guadeloupe, French Guiana, Réunion and Saint Pierre and Miquelon

(2) ZNI = non-interconnected zones

(3) FPE: Electricity Equalization Fund [Fonds de Péréquation de l’Électricité], current four-year period from the beginning of 2022 to the end of 2025

(4) CRCP of the FPE
ÉLECTRICITÉ DE STRASBOURG

~ 1,300 employees / €871m in Sales / €59.1m in Net Result

ÉS is an Alsatian energy producer which is committed to long-term energy and economic performance of its territory through its four activities:

- **Electricity distribution** (Strasbourg Électricité Réseaux)
  - 15,000 km of lines (including 740 km in HVB) in more than 400 Alsatian municipalities
  - 575,000 delivery points and 5,700 injection points (6.9TWh distributed)

- **Fourniture d’énergies** (ÉS Énergies Strasbourg)
  - 563,000 customers for electricity (5.2TWh) and 113,000 for gas (4.5TWh)
  - Associated services (corrective maintenance, digital services), and around energy transition (self-consumption, energy efficiency and electric mobility)

- **Energy services** (ÉS Services Énergétiques)
  - Realisation and operation of installations: homes, healthcare, the tertiary sector and industry
  - Operation of the three large-scale heat networks of Strasbourg city and 2,500 thermal installations

- **Renewable energy generation: 408GWh (290GWhffe and 118GWhée)**
  - **Deep geothermal**: 171GWh fossil-fired and 6 GWh electric (2 plants)
  - **Biomass**: 119GWh fossil-fired and 62GWh electric via one cogeneration plant
  - **Hydropower**: 46GWh (4 hydropower plants, and a 35% share in SEHRY (15 hydropower plants)

1899 : Creation of ÉS
1927 : Stock listing
2009 : Development of the supply activity (ÉS Énergies Strasbourg)
2012 : Acquisition of the local gas supplier (“Gaz de Strasbourg” brand)
2016 : ÉS becomes ENR producer
  - 2 Deep geothermal plants
  - Biomass cogeneration on heating network at Strasbourg
2017 : Development of the distribution activity (Strasbourg Électricité Réseaux)
2017 : Launch of the Illkirch Graffenstaden geothermal project
2018 : Equity investment (34%) in EEMEM SEM (Erstein ELD)
2019 : Commissioning of the hydropower plant in Alsace (Framont) and a solar facility in Mundolsheim
2021 – 2026 : generalised roll out of Linky™
EDF GROUP MAIN BUSINESSES

➢ NUCLEAR P. 77
➢ RENEWABLES P. 112
➢ THERMAL POWER P. 133
➢ REGULATED ACTIVITIES (NETWORKS) P. 136
➢ OPTIMISATION & TRADING P. 150
➢ CUSTOMER SOLUTIONS P. 166
➢ ENERGY SERVICES P. 181
➢ GAS P. 188
The main role of the optimiser is to:

- **ensure the balancing** between EDF’s upstream resources and markets in France,
- **secure and maximise the gross electricity margin** of the “generation-supply” set by constantly seeking the best opportunities to buy or sell on the wholesale markets.

**Upstream resources:** generation fleet, purchases on wholesale markets, contractual demand-side response capacity

**Markets:** sales to end customers, long-term supply contracts, sales on wholesale markets, sales to competitors in France (ARENH), partnership contracts

---

The optimizer programs the use of physical assets, secures gross electric margin of the set “production consumption”, operates on the wholesale market (through EDF Trading)

The supply-demand balance is forecasted for each time horizon
For each moment, the optimiser schedules the operation of available means of generation, mobilising them according to the merit order of variable costs\(^{(1)}\) until the estimated demand is met.

Before using the market, each producer determines the resources required to meet a given level of demand. It classifies them from the least expensive to the most expensive.

It then determines the marginal cost, which is the variable cost of the most expensive means of generation called to meet the supply/demand balance of its own portfolio.

Given this marginal cost, it determines the sales and purchases volumes.

Spot power price (day ahead) is based on the marginal cost that forms the intersection of the supply of all producers with the overall demand to meet.

---

\(^{(1)}\) Variable costs: operating costs proportional to the generated energy, fuel costs, CO2, costs of injection into the grid.
COST OPTIMISATION – SCHEDULING OF GENERATION FACILITIES BASED ON VARIABLE COSTS

Every day, the optimiser sets up for the next day the functioning tool of the generation facilities, taking into account their dynamic constraints and the merit order (see previous slide)

Legend:
- Peak facilities (thermal, load shedding)
- Hydro Reservoirs - STEP
- Gas
- Coal
- Nuclear
- “Must-run” (hydro run-of-river + pondage, …)
EDF TRADING, ACCESS PLATFORM TO WHOLESALE ENERGY MARKETS

MARKET ACCESS
- EDF Trading offers market access to the power, gas, LPG, LNG and environmental products markets in Europe, North America and Asia

SPECIALIST IN THE WHOLESALE ENERGY MARKET
- EDF Trading offers a full range of services and products on the wholesale markets: primary energy supply, management of generation, transport, regasification and storage assets, forward purchases/sales of energy, PPAs, green energy, environmental products (EUAs, UKAs, guarantees of origin, carbon offsets, biofuels, etc.)

VALUE CREATOR FOR EDF...
- As the exclusive market interface, EDF Trading optimises the value of the assets of EDF Group entities and implements their hedging strategy

... AS WELL AS FOR THIRD-PARTY CUSTOMERS
- EDF Trading offers its services to large commercial and industrial counterparties and customers, as well as to many producers and suppliers of energy

Well positioned with a broad geographical presence
- One of the largest sellers of gas and electricity in North America
- A leading player in the European gas and electricity markets
- Growing global LNG trading in the Atlantic and Pacific Basins through its partnership with JERA

EDF Trading 2021 EBITDA
€1200m

Did you know?
- EDF Trading also operates in the Japanese Power market and has established a trading desk in Tokyo
- EDF Trading has a diverse portfolio of carbon offset projects around the world to support EDF Group and third-parties with their decarbonization commitments
DISTRIBUTION OF ELECTRICITY SALES (1) ACCORDING TO THEIR MARKET PRICE EXPOSURE

1. Volumes sold at the ARENH price following the cost-stacking formula in the regulated sales tariffs (essentially blue residential and non-residential tariffs)

2. Volumes sold at the market price if this price is lower than ARENH arbitration threshold (ARENH price - capacity price) and ARENH price otherwise (4), which include:
   - The ARENH volumes that can be requested by alternative suppliers and network operators for their purchases of losses
   - Part of the volumes (5) sold to EDF final customers under market-based contracts

3. Volumes sold at the market price, whatever the price, which include:
   - Part of the volumes sold to EDF final customers: “market complement supply” in the regulated tariffs (6), balance of the volumes sold to clients under market-based contracts
   - Volumes sold on wholesale power markets

4. Contracts at negotiated prices that do not follow a market-indexed structure

---

1. Volumes excluding purchase obligations volumes and volumes under long-term supply contracts. Estimated distribution based on the situation in 2021, in particular in terms of EDF downstream market shares. In 2021, the level of cropping corresponding to ARENH over subscription (146.2TWh) by alternative suppliers has been applied to downstream offers.
2. Full year estimate, rounded to the nearest tenth TWh.
3. Regulated electricity sales tariffs.
4. EDF is subjected to the arbitrage between the two prices and its date of exercise is variable depending on the volumes (it takes place at the latest at the time of the ARENH end of year subscription window for a delivery the following year).
5. Related to the replication of the sourcing cost structure of alternative suppliers: balances of the volumes corresponding to the “ARENH rights”.
6. Related to the replication of the sourcing cost structure of alternative suppliers: the balancing volumes sourced on the market which exceed the “ARENH rights”.

---

~30TWh
Long-term contract

~60TWh
Part of market offers at market price

~33% driven by market price

~60TWh
Part of regulated tariffs (3) at market price

~70TWh
At ARENH price through market offers after cropping

~400 TWh
2021 (2)

~50TWh
At ARENH price through regulated tariffs (3) after cropping

~125TWh
At the minimum between market price and ARENH arbitration threshold for alternative suppliers (100TWh) and network losses (~25TWh)
EDF ENERGY: ESTIMATED AVERAGE FORWARD HEDGED PRICE

Average hedged price (1)
United Kingdom

In £/MWh

NB: projected prices, different from average realised prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>~52</td>
</tr>
<tr>
<td>2021</td>
<td>~42</td>
</tr>
<tr>
<td>2022</td>
<td>~49</td>
</tr>
</tbody>
</table>

Average price captured through hedging activities in relation with wholesale prices before the beginning of the delivery year (2)

Estimation based on:
➢ Notional generation volumes
➢ Season contracts prices

This average price does not take into account purchases and sales on wholesale markets that may take place during the delivery year depending on unexpected generation events. It is not the average realised sale price.

(1) Rounded to the nearest whole number. Excluding revenue associated with capacity certificates.
(2) Based on a principle of gradual closing of net positions before the end of the delivery year, based on a predefined hedging trajectory in view of liquidity constraints on the forward markets.
ARENH: CURRENT MECHANISM

The regulated access to historic nuclear power (ARENH) mechanism entered into effect in 2011 to allow alternative suppliers who make the request, for the supply to end customers, to benefit from a supply “under economic conditions equivalent to those for EDF resulting from the use of its nuclear power plants” through an annual product, which may be requested twice a year (in November and May), within the limit of an annual ceiling of 100TWh (excluding network losses). This mechanism is also open to network operators to cover their technical losses. The Energy Regulation Commission (CRE) is responsible for managing the mechanism and calculating the quantities of which it informs the alternative suppliers individually, and EDF in an aggregated manner.

The ARENH price has been fixed at €42/MWh since 1 January 2012. Since 2017, the delivered product includes 1MW of capacity certificates per megawatt of subscribed ARENH.

The law of 8 November 2019 on energy and climate granted the ministers responsible for the economy and energy the power:

• to set by decree the ceiling of the ARENH, as of 2020, within the limit of 150TWh; this ceiling having to be set “with the aim of contributing to price stability for the end consumer”;
• until the entry into force of the decree establishing the method for calculating the ARENH price, to set the ARENH price by decree; among the elements that may be taken into account to revise this price are in particular the changes in the consumer price index and the ARENH ceiling.

With regard to 2020 and 2021, the government stated that the conditions for fulfilling this option had already been discussed with the European Commission (any change in ARENH parameters, such as raising the ceiling, even with no change to the price, requiring a change to its decision of 2012 approving ARENH) and the question of a change to ARENH parameters would be asked according to the result of the negotiations under way with the European Commission in the future regulations of the existing electro-nuclear fleet, reiterating that French consumers continue to benefit through ARENH from protection against market price increases despite the ceiling effect.

With regard to 2022, to address the strong increase in prices on the European wholesale electricity market driven sharply upwards by global gas prices and, to a lesser extent, by the CO2 price, and also impacted by the prospect of the diminished availability of the nuclear fleet, the government capped the increase in regulated sales tariffs (RSTs) for electricity at 4% (including VAT) on 1 February 2022 (by reducing the TICFE tax on the final consumption of energy and setting the RST so as to respect an average increase of 4% (including VAT), accompanied by a tariff catch-up in 2023) and announced an exceptional allocation of an extra 20TWh of ARENH in 2022 (beyond the 100TWh ceiling). In its press release dated 13 January 2022, EDF estimated the impact of these measures on its 2022 EBITDA, given the information currently in its possession, at around €8.4bn on the basis of market prices at 31 December 2021. In its press release dated 14 March 2022, EDF re-evaluated this impact on its 2022 EBITDA at around €10.2 billion on the basis of the terms and conditions defined in Decree No. 2022-342 of 11 March 2022, given the information currently in its possession.

A structural reform, however, remains necessary to ensure a balanced regulatory framework for the current nuclear facilities, particularly with regard to the remuneration of the generation affected by ARENH and its asymmetrical nature. Pending such reform, ARENH adjustments are welcome in order to stabilise in RSTs the price impact of the capping of ARENH and to factor in the decrease in nuclear output.
➢ Historical situation: maximum annual sales volume of 100TWh (1) by EDF to alternative suppliers and 26.4TWh for network losses coverage

➢ In November 2021, ARENH requests from alternative suppliers for 2021 amounted to 160TWh.

➢ 13 January 2022: announcement of an additional exceptional allocation of 20TWh of ARENH volumes for 2022 (2), for the period from 1 April to 31 December 2022 at €46.2/MWh, in addition to the exceptional measures dedicated to limit the electricity price increase in 2022,

➢ Volume sold for 2022 (including 26.4TWh sold for network losses coverage): 126.4TWh of which 20TWh will be added as of the exceptional increase announced the 13 January 2022

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Source: CRE

(1) The Energy and Climate Change law of November 2019, provides the government with the possibility of raising the cap for global maximal volumes via a ministerial order, from 100 to 150TWh as of 1 January 2020. The law also allows the government to revise the ARENH price.

(2) According to the decree of 12 March 2022
ARENH: FORCE MAJEURE LITIGATION

- Due to the Covid health crisis, some suppliers have asked the Presiding Judge of the Paris Commercial Court to order, as a matter of urgency, the total suspension of deliveries of volumes from ARENH and/or their partial suspension up to the amount of the drop in electricity consumption of their customer portfolio during the crisis, invoking the Force Majeure clause provided for in the ARENH framework agreement concluded with EDF.

- The Summary Judge has decided that the conditions for Force Majeure have been met and has ordered EDF not to oppose the suspension of the agreement, entailing thereby the total interruption of the annual electricity transfer program.

- EDF has appealed the ruling. On 28 July 2020, the Paris Court of Appeals upheld the urgent application judge's decision, considering that the Force Majeure clause in the framework agreement has an automatic effect and that Force Majeure could not be excluded with the evidence required in summary proceedings. EDF filed an appeal on 24 September, which is still pending before the Cour de Cassation (the highest court of appeal).

- To safeguard its rights, EDF announced on 2 June the termination, as a precautionary measure, of the ARENH contracts binding it to these energy suppliers, as provided for in the event of a suspension of these contracts beyond a two-month period. Total Energie contested this termination before the judge in charge of summary proceedings. The latter ruled on 1 July 2020 and provisionally suspended the effects of EDF's termination announcement. EDF has appealed this ruling. On 19 November 2020, the Paris Court of Appeals overturned the ruling of the summary judge.

- These rulings were taken under an urgent procedure, on a provisional basis; only procedures on the merits will make it possible to establish definitively the merits of the respective positions of the parties.

- As of today, some alternative suppliers have introduced full civil proceedings against EDF with the Paris Commercial Court with a view to obtaining compensation for damages supposedly resulting from EDF's refusal to suspend ARENH deliveries on the basis of force majeure. On 13 April 2021, the Paris Commercial Court handed down an initial ruling ordering EDF to pay €5.88 million in damages and interest to an alternative supplier. The Court considered that the conditions of force majeure were met and concluded that EDF had committed a contractual breach for which it is liable by failing to suspend the delivery of ARENH volumes. On 30 November 2011, the Paris Commercial Court handed down two new judgments on the merits consistent with the position it had expressed on 13 April 2021. It ordered EDF to pay two alternative suppliers €53.93 million and €1.77 million respectively in damages and interest. EDF appealed these rulings.

- EDF appealed against the ruling before the Paris Court of Appeal.

- Other procedures are ongoing.
**PURCHASE OBLIGATION AND SALE ON WHOLESALE MARKET**

Public service mission: EDF and the LDCs(1) must buy electricity generated by certain electricity generation facilities (or pay them an "additional remuneration") whose development the French government would like to encourage, at rates set by the government (by decree or through tenders).

Pursuant to Article L. 121-7 of the French Energy Code, EDF is compensated for the additional costs resulting from the purchase obligations (PO) on the basis of a reference to prices from wholesale electricity markets, known as “avoided cost” (compensation). Starting from 1 January 2017, the costs of managing these contracts are also compensated.

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**EDF-Purchase obligations:**

According to the CRE ruling of 16 December 2014, the energy of purchase obligations is resold on the markets:

- the near certain component (i.e. predictable over the medium term) directly by tenders under transparent and non-discriminatory conditions
- the variable component (i.e. predictable for the day ahead) on EPEX Spot via EDF Trading (in the dedicated book).

Since the capacity mechanism has been set up, EDF has in charge the certification of the facilities under the purchase contract and resells these capacities at the auctions (nearly 6GW)

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**2021 Key figures(2)**

- Managed contracts Annual growth: +25,000 contracts
- ~€52m in management fees for EDF

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**Purchasing breakdown by sector in 2021 (in €m)**

- **Solar : 3,039**
- **Biomass : 408**
- **Biomass : 408**
- **Cogeneration : 965**
- **Wind : 2,303**
- **Hydro : 483**
- **Biogas : 475**
- **Others : 120**

---

**Key figures(2)**

- **OA**
  - 56.6TWh of purchased electricity
  - €8.4bn of purchases

- **CR**
  - 7.9TWh of sustained electricity
  - €38m of support paid

---

(1) Local distribution company
(2) Excluding Corsica and French overseas departments
CAPACITY MECHANISM IN FRANCE: PUT IN PLACE IN 2017

Established by the NOME law, approved by the European Commission on 8 November 2016
- Objective: to remunerate the means of generation and load shedding useful to security of supply
- Definition of the criterion of security of supply by the public authorities: 3 hours of shedding on average per year

Operated by RTE
- Definition of calculation methods and identifying peaks
- Issue of capacity certificates, control and management of capacity registry and settlement of gaps
- Ex-post calculation of each supplier’s obligations and the actual availability of certified facilities
- Provision of information on supply and demand for certificates

Suppliers’ obligation
- Calculation of the obligation

Capacity (generation, demand-side response)
- Capacity certification
- Availability commitment

Demand for capacity certificates
- Trade of certificates
- Verification of certificates held vs. peak consumption

Offer of capacity certificates
- Control of effective capacity availability

Capacity price

3 hours Loss of load expectation standard

Capacity matches peak demand ➔ Security of supply safeguarded

(1) Source: DGEC, RTE
CAPACITY MECHANISM IN FRANCE: STANDARD CALENDAR

Year - 4
- Certification of existing capacities
- Capacity auctions organized by EPEX Spot
  - 15 auctions on the 4 years before the delivery year
- Continuous over-the-counter exchanges
- Implementation by suppliers of peak-load shedding measures in their customer portfolio

Year - 1
- Certification of new capacities (including demand-side response)
- RTE controls the effective availability of the certified capacity
- Adjustments by operators, at progressive cost

Delivery Year Y
- 1 auction in year Y
- Estimated amount of obligations of suppliers

Year + 1
- 1 auction in year Y+1
- Final amount of obligations calculated by RTE

Year + 3
- 1 auction at the beginning Y + 3
- Deadline for transfer of certificates
- Financial settlement of deviations for capacity not available
- Financial settlement if capacity is insufficient

Source: RTE

2021 FACTS & FIGURES
## CAPACITY MARKET: THEORETICAL YEAR (1)

<table>
<thead>
<tr>
<th>Valuation method for certificates</th>
<th>Timing of EBITDA impact</th>
<th>Certificates concerned</th>
<th>Price</th>
<th>Volumes concerned (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate sales on the market</td>
<td>At the time of closing of the transactions</td>
<td>Any certificate</td>
<td>Auction price (or negotiated price for OTC sales)</td>
<td>~ 15GW for DY+1 ~ 15GW for DY+2</td>
</tr>
<tr>
<td>(via auctions or OTC, up to 25% of volumes must be proposed during auctions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal sales to the obligated actor (o/w ARENH share of supply contracts and tariffs)</td>
<td>None</td>
<td>Any certificate</td>
<td>N/A</td>
<td>~ 15GW by DY</td>
</tr>
<tr>
<td>Non-monetised transfers relating to ARENH volumes</td>
<td>None</td>
<td>Certificates for delivery year Y+1</td>
<td>0</td>
<td>~ 15GW by DY</td>
</tr>
<tr>
<td><strong>Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate purchases on the market (via auctions or OTC)</td>
<td>None (entry into stock)</td>
<td>Any certificate</td>
<td>Auction price (or negotiated price for OTC sales)</td>
<td>~ 30GW by DY (~15GW for DY+1 and ~15GW for DY+2)</td>
</tr>
<tr>
<td>Outflow from stock of volumes purchased</td>
<td>At the time of energy delivery</td>
<td>Certificates for delivery year Y</td>
<td>Calculated from auctions prices</td>
<td>~30GW by DY (~15GW for DY-1 and ~15GW for DY-2)</td>
</tr>
<tr>
<td>Pass through of the capacity price to end customers (market component of supply contracts and tariffs)</td>
<td>At the time of energy delivery</td>
<td>Certificates for delivery year Y</td>
<td>Calculated from auctions prices</td>
<td>~ 48GW (o/w ~ 35GW valued)</td>
</tr>
</tbody>
</table>

(1) With an assumption of 2 years of auctions in a given year, and ARENH cropping at 30%
(2) DY – delivery year
## GREAT BRITAIN CAPACITY AUCTION RESULTS FOR EDF ENERGY

<table>
<thead>
<tr>
<th></th>
<th>Clearing price £/kW/an</th>
<th>Nuclear</th>
<th>Coal</th>
<th>Demand-side Response (DSR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2016 Q4 (2020/2021)</strong></td>
<td>22.5 (2015/2016 prices)</td>
<td>All 16 units (7.9GW)</td>
<td>3 of 8 units (1.8GW)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2018 Q4 (2021/2022)</strong></td>
<td>8.4 (2016/2017 prices)</td>
<td>All 16 units (7.9GW)</td>
<td>0 unit</td>
<td>5 units (32.1MW)</td>
</tr>
<tr>
<td><strong>2020 Q3 (2022/2023)</strong></td>
<td>6.4 (no indexation)</td>
<td>12 units (5.9GW)</td>
<td>0 unit</td>
<td>0 unit</td>
</tr>
<tr>
<td><strong>2021 Q1 (2023/2024)</strong></td>
<td>16.0 (2018/2019 prices)</td>
<td>8 units (4.0GW)</td>
<td>0 unit</td>
<td>4 units (21.5MW)</td>
</tr>
<tr>
<td><strong>2021 Q1 (2024/2025)</strong></td>
<td>18.0 (2019/2020 prices)</td>
<td>4 units (2.0GW)</td>
<td>0 unit</td>
<td>0 unit</td>
</tr>
</tbody>
</table>

The slide includes capacities for which agreements were awarded (de-rated capacity). For DSR this equates to bidding capacities in the context of auctions.
A capacity mechanism was set up in 2019 using rules approved in a decree of 28 June 2019 issued by the Economic Development Ministry. Edison awarded 2.8 GW of existing capacity in 2022 and 2023 auctions, and a total of 1.4 GW of new capacity for a fixed annual premium of €75,000/MW for new capacities and €33,000/MW for existing capacities. The auction for delivery year 2024 have taken place on February 21, 2022, Edison awarded 2.275 MW existing capacity at 33.000 €/MW and 7 MW new capacity not authorized at 33.467 €/MW. Generation capacity eligible for capacity mechanism has to respect specific requirements in terms of fossil-fuel carbon emissions per kWh of electricity.

### FUNCTIONING
This mechanism is based on an auction process organised by TERNA, the Italian transmission grid operator, for each delivery year. Operators of existing and new production or storage units can participate in the auctions.

### FIXED PREMIUM
The operators of the selected capacities are paid through a fixed premium, for one year in case of existing units and 15 years for new units. The fixed premium is paid during the delivery year.

### INCENTIVE FOR CAPACITY AVAILABILITY
The selected operator must offer its capacity on the day-ahead market (Mercato del Giorno Prima) and the balancing market (Mercato per il Servizio di Dispacciamento). If the selling price on these markets reaches a level exceeding a strike price defined by the Italian Regulatory Authority for Energy, Networks and Environment (ARERA), the operator must give back the surplus to TERNA.

(1) Fixed premium
EDF GROUP MAIN BUSINESSES

➢ NUCLEAR P. 77
➢ RENEWABLES P. 112
➢ THERMAL POWER P. 133
➢ REGULATED ACTIVITIES (NETWORKS) P. 136
➢ OPTIMISATION & TRADING P. 150
➢ CUSTOMER SOLUTIONS P. 166
➢ ENERGY SERVICES P. 181
➢ GAS P. 188
A RECOGNISED, INNOVATIVE AND DIGITAL CUSTOMER RELATIONSHIP

High customer satisfaction in France

- BUSINESSES AND PROFESSIONALS
- LOCAL AUTHORITIES
- RESIDENTIAL CUSTOMERS

9 out of 10 customers

Did you know ?

All EDF Customer Relationship Centers are located in France. They help to maintain employment areas throughout the territory. In 2021, EDF became the first company to obtain the “Relation Client France” certification implemented by Association Française de la Relation Client (AFRC) and Association Pro France. This certification is granted to companies having chosen to localise all their customer service in France and having committed to initiatives in local integration, training and inclusion in French territories.

EDF continues its certification approach it began over ten years ago. This approach is an essential component of its strategy as a responsible employer. In 2019, EDF opted for Afnor’s “Engagé RSE” (CSR committed) certification based on highly demanding guidelines derived from the ISO 26000 standard. The assessors awarded EDF’s customer relations centres with a “Confirmed” level in terms of CSR. The certification highlights the quality of the company’s social practices in terms of customer relations, notably through the training of customer advisors and the attention paid to their working conditions.
EDF CUSTOMER SOLUTIONS IN FRANCE: RESIDENTIAL CUSTOMERS

EDF innovates in order to be the supplier for the well-being of its customers with a high quality services and reference offers.

ENERGY OFFERS TAILORED TO CUSTOMER EXPECTATIONS

The regulated sales tariff and new market offerings:

➢ “Mes jours Zen”, the first electricity offer that adapts to the needs of consumers (choice a day in addition to the weekend when the price is lower)

➢ The “Gamme Vert Electrique” with:
  • Vert Électrique
  • Vert Électrique Week-end (for customers equipped with Linky…)
  • Vert Électrique Auto (… and with an electric vehicle)
  • Vert Électrique Régional (backed by green output in a French region)

➢ An online offer with attractive prices: Digiwatt

➢ The “Gamme Avantage Gaz” (4-year fixed price):
  • Avantage Gaz
  • Avantage Gaz Durable, incorporating carbon offsetting
  • Avantage Gaz Connecté, integrating the management of the individual boiler

➢ Avantage Gaz Optimisé, at an advantageous price that is always below the gas regulated tariff

SERVICES AND GOOD DEALS FOR OUR CUSTOMERS

➢ Check, a moving assistant on smartphones with advantageous deals negotiated with partners

➢ An offer of troubleshooting assistance. Three options of troubleshooting assistance, for a rapid intervention

➢ Assurénergie+ pour aider les clients à payer leurs factures en cas de coup dur avec en plus des services d’accompagnement pour faciliter le quotidien

➢ The IZI by EDF local services platform for home improvements, particularly in terms of energy renovation and electric mobility

➢ The website Prime-energie-edf.fr to receive financial assistance for renovation work

➢ The network of Energy Saving Partners qualified RGE (Recognized Environmental Guarantor).

➢ The “Mon chauffage durable” offer for the replacement of oil, gas or coal boilers by a heat pump, in order to reduce energy bills and CO₂ emissions.

OMNI-CHANNEL SUPPORT FOR ENERGY SAVINGS

➢ The digital solution Mes écos et moi enables all customers to better understand and control their consumption (monitoring their actual daily or 30-minute consumption in euros and kWh)

➢ The Fil d’Actu solution, on the EDF & Moi application, also provides access to information to understand your consumption and make energy savings.
EDF CUSTOMER SOLUTIONS IN FRANCE: BUSINESS MARKET (COMPANIES, PROFESSIONALS AND LOCAL AUTHORITIES)

EDF is positioned as local business partner to assist its customers in the energy transition and their competitive challenges.

ENERGY OFFERS FOR ALL CONSUMPTION PROFILES

➢ Electricity and gas supply offers tailored to every customer segment:
  • Electricity and gas offers at guaranteed prices: electricity offers at differentiated prices by time slot and by season – Flexible, Matina or Estivia; packaged offers for more simplicity with the Performance pack (Guaranteed Contract and Consuming Monitoring)
  • Customisable offers are proposed to multi-sites and large tertiary and industrial customers

➢ The opportunity to choose a Renewable Energy option, whatever the chosen electricity supply offering, and solutions for the supply of sustainable gas

AN EXTENDED RANGE OF SERVICES

➢ Services to simplify the everyday lives of small- and mid-size business customers: breakdown assistance services in electricity, gas and plumbing, and electronic and grouped invoicing;

➢ Local services tailored to the needs of professional customers: the “Bénéfices Pro” offering when moving into their premises and the completion of works with IZI-by-EDF

➢ Digital solutions and expertise to support industrial and tertiary customers in the management of energies and fluids: monitoring and analysis of consumption, consumption expertise, and Intelligent Building Steering

➢ Support services for achieving carbon neutrality in energy consumption and output: offerings related to self-consumption of photovoltaic generation, the supply of renewable-origin energy, electric mobility and advice on how to decarbonise business activities.

CUSTOMER ADVISORS LOCATED IN FRANCE & A PERSONALISED RELATIONSHIP

➢ A personalised, human and digital customer relationship: advisors in France, information at every stage of the customer journey, dedicated websites and customer area

➢ SMS interactions and Web Call Back

➢ Specific tools for large customers: Business Board to track sourcing optimisation and send purchase orders with one click

Key figures

3 million
of visitors on websites and client areas (per year)

240,000
monthly connexions to customer pages

Specific support for local authorities and social housing lessors

EDF has developed tailored solutions adapted to the needs of local authorities and social landlords: energy services to combat energy vulnerability. Special systems to improve the energy efficiency of social housing: the “amount of charges” offering to promote energy savings certificates (CEEs). Ergo-therapy assessments for senior dwellings.
ELECTRICITY SUPPLY IN FRANCE

SALES TO END CUSTOMERS (1)

(in TWh)

<table>
<thead>
<tr>
<th>Year</th>
<th>Residential customers (at regulated tariffs)</th>
<th>Local authorities, companies and professionals (at market offers and including transitional offer)</th>
<th>Local authorities, companies and professionals (at regulated tariffs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>112.2</td>
<td>125.3</td>
<td>1.6</td>
</tr>
<tr>
<td>2020</td>
<td>105.9</td>
<td>108.8</td>
<td>3.2</td>
</tr>
<tr>
<td>2021</td>
<td>105.3</td>
<td>117.0</td>
<td>5.4</td>
</tr>
</tbody>
</table>

(1) Rounded to the nearest tenth. Including EDF’s own consumption
(2) Blue professional tariff, LDC (Local Distribution Companies) at transfer price and Yellow and Green tariffs, below 36kVA that persist beyond 2015

Residential customers
At market offers
ELECTRICITY SUPPLY IN FRANCE – SALES UNDER REGULATED TARIFFS SPLIT

<table>
<thead>
<tr>
<th>Sales to End Customers for 2021 (1)</th>
<th>(in TWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential customers At market offers</td>
<td>$117.0$</td>
</tr>
<tr>
<td>Residential customers At regulated tariffs</td>
<td>$105.3$</td>
</tr>
<tr>
<td>Local authorities, companies and professionals At regulated tariffs</td>
<td>$10.8$</td>
</tr>
<tr>
<td>Local authorities, companies and professionals Market offers including transitional offer</td>
<td>$8.5$</td>
</tr>
</tbody>
</table>

- **Residential customers At market offers**: $117.0$ TWh
- **Residential customers At regulated tariffs**: $105.3$ TWh
- **Local authorities, companies and professionals At regulated tariffs**: $10.8$ TWh
- **Local authorities, companies and professionals Market offers including transitional offer**: $8.5$ TWh

(1) Rounded to the nearest tenth. Including EDF’s own consumption

(2) Local Distribution Companies (LDCs)

(3) Of which Yellow and Green tariffs for 0.06TWh - Tariffs lower than 36 kVA

---

**Notes:**
- **SALES TO END CUSTOMERS FOR 2021 (1)**
- **LDC (2) transfer price**
- **Blue non-residential tariff (3)**
- **Blue residential tariff**
## Change in Blue tariff

<table>
<thead>
<tr>
<th>Date</th>
<th>Change in Residential Blue tariff (VAT excluded)</th>
<th>Change in Residential Blue tariff (including VAT)</th>
<th>Change in Non-Residential Blue tariff (VAT excluded)</th>
<th>Change in Non-Residential Blue tariff (including VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/02/2018</td>
<td>+0.7%</td>
<td>+0.6%</td>
<td>+1.6%</td>
<td>+1.3%</td>
</tr>
<tr>
<td>01/08/2018</td>
<td>-0.5%</td>
<td>-0.3%</td>
<td>+1.1%</td>
<td>+0.9%</td>
</tr>
<tr>
<td>01/06/2019</td>
<td>+7.7%</td>
<td>+5.9%</td>
<td>+7.7%</td>
<td>+5.9%</td>
</tr>
<tr>
<td>01/08/2019</td>
<td>+1.49%</td>
<td>+1.26%</td>
<td>+1.34%</td>
<td>+1.1%</td>
</tr>
<tr>
<td>01/02/2020</td>
<td>+3.0%</td>
<td>+2.4%</td>
<td>+3.1%</td>
<td>+2.4%</td>
</tr>
<tr>
<td>01/08/2020</td>
<td>+1.82%</td>
<td>+1.54%</td>
<td>+1.81%</td>
<td>+1.58%</td>
</tr>
<tr>
<td>01/02/2021</td>
<td>+1.93%</td>
<td>+1.61%</td>
<td>+3.23%</td>
<td>+2.61%</td>
</tr>
<tr>
<td>01/08/2021</td>
<td>+1.08%</td>
<td>+0.48%</td>
<td>+0.84%</td>
<td>+0.38%</td>
</tr>
<tr>
<td>01/02/2022</td>
<td>+24.3%</td>
<td>+4.0%</td>
<td>+23.6%</td>
<td>+4.0%</td>
</tr>
</tbody>
</table>

REGULATED SALES TARIFFS IN FRANCE: CHANGE IN AUGUST 2021 (2/3)

RESIDENTIAL BLUE TARIFF EXCLUDING TAXES (1)

<table>
<thead>
<tr>
<th></th>
<th>01/02/2021</th>
<th>01/08/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy + fees (2)</td>
<td>53.1</td>
<td>54.3</td>
</tr>
<tr>
<td>Capacity</td>
<td>49.4</td>
<td>49.4</td>
</tr>
<tr>
<td>TURPE (2)</td>
<td>15.9</td>
<td>15.7</td>
</tr>
<tr>
<td>Catch-up (4)</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Cost to serve (3) and margin</td>
<td>3.0</td>
<td>3.3</td>
</tr>
<tr>
<td>€127.3/MWh</td>
<td>€128.6/MWh</td>
<td></td>
</tr>
</tbody>
</table>

AVERAGE BILL BREAKDOWN VAT INCLUDED (BLUE RESIDENTIAL CUSTOMER)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes</td>
<td>43.1</td>
</tr>
<tr>
<td>TICFE (6)</td>
<td>22.5</td>
</tr>
<tr>
<td>TURPE</td>
<td>54.3</td>
</tr>
<tr>
<td>Generation and commercial costs</td>
<td>74.3</td>
</tr>
<tr>
<td>€194.3/MWh (5)</td>
<td></td>
</tr>
</tbody>
</table>

(1) Source: Data from the 8 July 2021 deliberation of the CRE, approved by official decision published at the Journal Officiel on 31 July 2021
(2) At August 2021 and February 2021, the “Energy + fees” and “TURPE” figures are based on an average calculation on customers portfolio at the Regulated Sales Tariffs at end-2020 (base calculation for the CRE deliberation of 08/07/2021)
(3) Including cost of Energy Efficiency Certificates
(4) Balance of over-coverage 2018 + catch up due to tariff freeze at the beginning of 2019 + commercial costs 2020
(5) Due to rounding, the total is not strictly equal to the sum of the components
(6) Ex-CSPE
REGULATED SALES TARIFFS IN FRANCE : CHANGE IN FEBRUARY 2022 (3/3)

RESIDENTIAL BLUE TARIFF EXCLUDING TAXES (1) (2)

+24.3%
+€31.3/MWh

+4.0%
+€7.7/MWh

€128.6/MWh
€159.9/MWh

01/08/2021
01/02/2022

54.3
15.7
5.9
49.4
3.3

54.3
15.2
4.9
85.7
-0.2

Capacity
Energy + fees – postponement to 2023 (3)
Catch-up (5)
Cost to serve (4) and margin

TURPE

TICFE (7)

Generation and commercial costs

AVGARE BILL BREAKDOWN VAT INCLUDED (BLUE RESIDENTIAL CUSTOMER)

Taxes

41.1
1.0

54.3

105.6

€202.0/MWh (6)

(1) Source: for February 2022, date from the decree of 28 January 2022 published at the Journal Officiel on 30 January 2022
(2) At August 2021 and February 2022, the figures are based on an average calculation on customers portfolio at the Regulated Sales Tariffs at end-2020 (base calculation for the CRE deliberation of 18/01/2022)
(3) As part of the tariff shield, part of the 2022 increase is postponed to 2023 to limit the average increase in the 2022 residential blue tariff to 4% including tax
(4) Including cost of Energy Efficiency Certificates
(5) Commercial costs of 2021 + catch-up of January 2021 (catch-up of the tariff freeze of 2019 is ended)
(6) Due to rounding, the total is not strictly equal to the sum of the components
(7) Ex CSPE
ILLUSTRATION OF THE ENERGY PART CALCULATION IN THE REGULATED TARIFFS

**Illustrative example of the cost of sourcing the energy share for an alternative supplier (2021)**

<table>
<thead>
<tr>
<th>(in GWh)</th>
<th>Example: alternative supplier planning to sell 215 GWh to its residential customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>215</td>
<td>69 ~32% = Proportion from means of production other than nuclear (see composition of the French electrical mix)</td>
</tr>
<tr>
<td></td>
<td>146 ~68% = Proportion from nuclear excluding long-term contracts and eligible for ARENH within the limit of 100 TWh (see composition of the French electricity mix)</td>
</tr>
<tr>
<td></td>
<td>100 ~47% = Volumes obtained under ARENH conditions post capping (100TWh available out of 146.2 requested, i.e. 68.4%) = €42/MWh (2)</td>
</tr>
</tbody>
</table>

**Replication in volumes sold by EDF to regulated sales tariffs (2021)**

<table>
<thead>
<tr>
<th>(en TWh)</th>
<th>Residential customers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34 ~32% = Volumes valued at the average of 2021 forward prices for the previous 24 months (01/01/19 to 31/12/20) = €46.7/MWh</td>
</tr>
<tr>
<td></td>
<td>23 ~21% = Volumes not obtained at ARENH (capping of 46.2TWh not available out of 146.2TWh requested, i.e. 31.6%), valued at the average of the 2021 forwards of December 2020 (1) = €48.2/MWh</td>
</tr>
<tr>
<td></td>
<td>72 ~68% = Proportion from nuclear excluding long-term contracts and eligible for ARENH within the limit of 100 TWh (see composition of the French electricity mix)</td>
</tr>
<tr>
<td></td>
<td>49 ~47% = Volumes obtained under ARENH conditions post capping (100TWh available out of 146.2 requested, i.e. 68.4%) = €42/MWh (2)</td>
</tr>
</tbody>
</table>

NB: Volumes sold at market offer follow the same kind of pattern. The share of electricity coming from nuclear is more important as industrial customers have a more baseload consumption profile. Also, the valuation of the volumes can be different as some customers may have long term supply contracts at fixed prices.

(1) Consideration of future market prices from 02/12/20 to 24/12/20, post announcement of the results of the November ARENH window (146.2 TWh requested for 100 TWh available, leading to sourcing on the market of 46.2 TWh "clipped").

(2) Post results of the November 2020 ARENH counter (100 TWh delivered at the ARENH price for a demand of 146.2 TWh).
FRANCE: COMPONENTS OF THE COST STACKING METHOD FOR THE BLUE TARIFF

1. Cost of regulated access to historical nuclear electricity taking into account the ARENH ceiling

2. Cost calculated according to average consumption characteristics and observed forward market prices

3. Cost of the capacity guarantee from the mechanism requiring suppliers to have capacity guarantees as from 2017 covering their customers’ peak consumption

4. Commercial costs of a supplier at least as efficient as EDF in the business of supplying electricity to those customers having subscribed contracts under regulated tariffs (including cost of energy savings certificate system)

5. Margin earned on electricity supply activity:
   - Return on capital employed in marketing activity
   - WCR coverage

6. Delivery cost, which reflects the cost of using the electricity transmission and distribution systems

Market complement - Energy
Market complement - Capacity
Supply costs
Normal margin on supply activity
TURPE
ARENH

(1) Source: Decree no. 2014-1250 of 28 October 2014 modifying the decree no. 2009-975 of 12 August 2009 on regulated tariffs
**ENERGY SAVING CERTIFICATES SYSTEM**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed in 2021</td>
<td></td>
</tr>
</tbody>
</table>

| Enhanced targets, a greatly increased scheme cost | The national obligation for the fifth period was set at 2,500TWhc by the decree of 3 June 2021 (up 17.2% compared with the fourth period).<br>➢ Of which 730TWhp for households in energy poverty (+37% with, in parallel, the shift of vulnerability towards households with extremely low incomes) and 1,770TWhp of conventional energy savings certificates (CEE) obligation (+10.7%)<br>➢ The measure costs over €5bn a year<br>➢ Rebalance of the obligation between energies, historically unfavourable to electricity (Elec +4% / Gas +58% / Fuels 18% compared with the 4th period)<br>➢ Phased lowering of the franchise threshold (400 GWh/year → 100GWh/year from 2024) to limit distortions to competition<br>➢ Limitation of “Coups de Pouce” schemes and more generally bonuses (25% of the obligation)<br>➢ Implementation of inspections of energy savings work operations at beneficiaries, carried out by accredited inspection offices before the obliged party is able to make its EEC request to the public authorities.<br>➢ The Fit for 55 package and the EU’s EED Directive (target on energy savings increased from today’s 0.8% to 1.5% in 2024) could lead to an increase in the EEC obligation in 2024. This potential increase would result from the EEC 2024-2033 obligation trajectory to be decided on as part of the energy and climate planning act to be adopted before 1 July 2023. |
| Publication 5th period obligation |                                                                                                                                                                                                |

| Involved parties | An obligation imposed on energy suppliers to achieve energy savings for customers called “obligated parties”.<br>➢ Electricity, gas, heating, refrigeration, domestic fuel and automotive fuel<br>➢ In order to promote the issuance of energy efficiency operations to their customers<br>➢ Households, local authorities, social housing landlords or business/professionals |

| EDF and the mechanism | EDF is the first obligated party and intervenes in several areas:<br>➢ Residential (insulation work and the replacement of heating equipment thanks to the subsidies provided by the “Coups de Pouce” schemes via the “Mon chauffage durable” offer), social-housing lessors and industry and services<br>➢ Financing of national programmes : ADVENIR (electric vehicle recharging stations), FEEBat (training craftsmen), SARE (Service d’Accompagnement pour la Rénovation Energétique) with the ADEME, ACTEE with the FNCCR, etc. |
CUSTOMER SOLUTIONS IN THE UK: EDF ENERGY

RESIDENTIAL CUSTOMERS

➢ Highly competitive market with ~33 suppliers\(^{(1)}\), EDF Energy market share at 8% at end-January 2022.
➢ During 2021, EDF Energy supplied 12.5TWh of electricity and 35.2TWh of gas for the domestic segment.
➢ 3.3 million electricity accounts and 2.3 million gas accounts on this segment at 31 December 2021.
➢ Despite the industry wide challenges such as the current energy crisis, EDF has maintained a Trust pilot score of ‘Great’ and is rated 3rd out of 22 energy suppliers by Citizens Advice based on July-September 2021 data, and 2nd of the large suppliers, as defined by Ofgem.

BUSINESS CUSTOMERS

➢ In 2021, the non-domestic segment supplied a total of 30.8TWh of electricity, 1.9TWh to 221k small business customers ("SME") and 28.9TWh to 9.2k medium and 5k large business customers ("I&C") accounts.
➢ In Large Business Sales, a targeted new-business approach has led to the successful acquisitions of 12 new customers in 2021 (double previous years).
➢ In the Export market, EDF has grown its Power Purchase Agreement business and has become the largest renewable power offtaker (based on owned and 3rd party capacity) according to the latest industry market report. EDF has also successfully bid to become the offtaker of the Sofia Wind Farm generation; 6.5TWh of annual volume is expected to become fully operational in 2026.

EDF Energy: fairness and convenience for customers; efficient operations; innovation (digital technology & smart metering)

➢ EDF Energy has brought innovative concepts to market through a rapid development approach. A high focus is on the Internet of Things (IoT) with multiple applications being developed.
➢ Powervault – a smart way to store free solar or cheap energy from the grid to reduce energy bills.
➢ PowerShift gained its first customers in 2019. It offers customers flexibility and forecasting services for storage and small scale generation to earn revenues from reducing or shifting energy demand.
➢ EDF Energy’s acquisition of PodPoint (Electric Vehicles (EV) charge point operator) in the UK has created significant value with 8,565 EV related sales in 2021. PodPoint was floated on the London Stock Exchange (4/11/2021) raising £105m to fund future growth in the EV market.
➢ 452k smart-meters installed by EDF Energy for its customers in 2021.

\(^{(1)}\) Cornwall Insight data at 31/10/2021
CUSTOMER SOLUTIONS IN ITALY: EDISON

- Edison, through its 100% controlled company Edison Energia is involved in the electricity, gas and value-added services supply to Italian customers
- The acquisition of the Italian activities of Gas Natural/Naturgy and Attiva in 2018, and their integration into Edison Energia, allowed to increase Edison’s customer base and to enlarge the company’s presence in Central and Southern Italy. The acquisition of Energia Etica in 2021 strengthens Edison’s position in the retail market. In addition, at the end of 2021, Edison acquired Medicoora.

Business market (B2B)
- Edison is a leader in the B2B market both in power and gas
- Second operator in terms of volumes to final customers, after the incumbents Enel (gas) and Eni (power)
- Synergies for the development of the biomethane and bioLNG business segment to make the transport sector more sustainable

Retail market (B2C)
- Late 2008: Edison entered the retail free market in power and gas, positioning itself as the new real alternative to incumbents (Enel, Eni, ex-Municipalities)
- July 2019: Completion of the acquisition of Assistenza Casa, company active in maintenance and domestic fault repair services, also allowed the development of further value-added services and an expansion of the offer

New innovative offers and services
- Edison Casa Relax: 24/365 assistance for electricity system, unlimited interventions, monthly fee.
- Prontissimo Casa: Telephone Assistance (24h x 7 days a week) and a network of 2,000 artisans ready to intervene for every need (gas, plumber, locksmith…)
- Edison My Comfort: Sale, Installation, Maintenance, Insurance of cooling and heating systems.
- Superbonus 110%: Wide range of products for energy efficiency interventions, providing customers with tools to obtain tax deductions
- My Sun: a new innovative service that combines a photovoltaic system, a storage and a commodity offer
- Edison Plug & Go: electric cars long rental (2-5 years) , installation of a charging wall box and app (for public recharges).
- Edison Sweet: new innovative offer with a customer loyalty mechanism (bonus and incentives) in order to reduce the churn rate
- Edison Resolve: new offer a wide-ranging offer of domestic services: house cleaning, laundry, appliance repair, plant interventions, renovations and virtual closet and box

### POWER SALES IN 2021
- 10.8TWh

### GAS SALES IN 2021
- 7.1bcm \(^{(1)}\) o/w 1.3bcm resellers
- 5.8bcm business
- 2.5TWh
- 674Mm\(^3\) \(^{(2)}\)
- 0.7m contracts \(^{(3)}\)
- 0.9m contracts \(^{(3)}\)

---

(1) Billion of cubic meters
(2) Million of cubic meters
(3) Data at end 2021, points of delivery
The second largest player in the Belgian energy market, Luminus supplies electricity and gas to more than 2.1 million residential and professional customers (1) and local authorities.

In May 2021, Luminus acquired the supplier Essent Be with a portfolio of around 0.5 million customers, mainly B2C. Essent’s portfolio forms a complementary fit in terms of sales channels and geographical breakdown. The acquisition strengthens Luminus’s second-ranking position.

Energy services:
- The company is involved for residential customers through its subsidiaries Rami Services, Dauvister, Leenen, and Insaver, mainly by providing boiler installation and maintenance, installing solar panels, and providing “Home Assistance” services in the event of unexpected damage at home.
- Sales of boilers and PV installations remain at a high level, with around 1,900 installations in 2021. The launch of new combined service/maintenance offers for boilers.
- At end-2021, the B2C portfolio for those services has more than 175,000 contracts
- For its industrial customers, Luminus together with ATS, Luminus Solutions, offers integrated electricity and heating solutions. In addition, its subsidiary Luminus Solutions (in which Luminus and Dalkia own a 51% and 49% stake respectively) provides energy efficiency services for administrative buildings, hospitals, schools, … based on an energy performance contract.
- In 2021, further LED renovation works on street lighting equipment for the major roads in the Walloon region (with the consortium Luwa, including Dalkia Electrotechnics / Citelum, Luminus,...).

Key figures
- 2,358MW installed
- 7.0TWh of electricity generation
- 2.1 million delivery points
  - ~23% market share
  - ~98% B2C

Did you know?
- In 2021, Luminus continued to move ahead with its expansion strategy by extending its presence upstream in the value chain with the acquisition of a minority stake in a company that develops solutions for electric mobility and energy management for business and retail customers. Despite the crisis, ATS pursued its external growth strategy by acquiring a range of installers in northern France with a view to strengthening its industrial coverage.
EDF GROUP MAIN BUSINESSES

- NUCLEAR P. 77
- RENEWABLES P. 112
- THERMAL POWER P. 133
- REGULATED ACTIVITIES (NETWORKS) P. 136
- OPTIMISATION & TRADING P. 150
- CUSTOMER SOLUTIONS P. 166
- ENERGY SERVICES P. 181
- GAS P. 188
ENERGY SERVICES FOR THE GROUP’S INDIVIDUAL & B2B CUSTOMERS

INDIVIDUAL CUSTOMERS

High expectations from the Group’s individual customers:

➢ understanding and controlling their consumption and bills,
➢ controlling their impact on the environment.

The range of service offers is growing, for more serenity and to support the challenges of today and tomorrow:

- The monitoring of heating, air quality, the charging station of the electric vehicle, etc. by voice and by touch
- Installation, maintenance and repair of heating and hot water equipment
- Services for sustainable housing and electric mobility: energy renovation and comfort works, installation of charging stations and heating equipment (together with IZI Confort)
- Electric mobility at home and when traveling with the Izivia Pass
- Solar photovoltaic solutions « Mon Soleil & moi » for self-consumption

B2B CUSTOMERS

➢ The EDF Group, through its expertise, can assist companies, industries and territories throughout the entire energy chain and on projects as different as heat networks, intelligent lighting, low-carbon decentralised generation, energy management, sustainable mobility or eco-neighbourhoods

- Smart building: Energy efficiency, buildings, energy management, self-consumption, heat recovery, ...
- Smart factory: Data, artificial intelligence, predictive maintenance, energy efficiency, circular economy, economic performance, ...
- Smarticity: Local production, heat networks, renewable and recovery energy, thermal and electrical smart grids, collective self-consumption, urban services, ...

➢ Combining digital expertise, economic and low carbon performance, EDF and its subsidiaries invent innovative solutions tailored to each need

➢ Assist companies throughout the entire energy chain

Consulting Engineering Installation Operation/Maintenance Management & Monitoring Funding
SERVICE SUBSIDIARIES: EXPERTISE ON THE ENTIRE B2B ENERGY CHAIN

Decentralised low carbon production

The valuation of local resources

The heating and cooling networks

Urban services

Energy efficiency solutions

Electrical engineering

Financing

The energy management system

A creator of services and solutions to support customers and regions in the shift towards carbon neutrality

A benchmark in the low-carbon transition of society, EDF creates value for its customers through the energy and innovative solutions it provides to them.

CAP 2030 target:

> 15 Mt of CO$_2$ avoided*

Scope:

* The business activities of the Customer Services and Territories division - EDF estimate, including CO$_2$ savings stemming mainly from heating and cooling networks, the development of electric vehicles and energy saving certificates.
**DALKIA: A MAJOR PLAYER IN THE ENERGY TRANSITION AT THE SERVICE OF ITS CUSTOMERS**

- **A leader in energy services in France**, Dalkia has been helping regions accelerate their sustainable energy performance for 80 years. Dalkia is also developing internationally.

- **Two major business from decentralised generation to demand-side management:**
  - Development and upgrading of renewable energies and recovery through heating and cooling networks (biomass, géothermy, thalassotherapy, waste heat recovery, etc.).
  - Energy savings through Energy Performance Contracts and management of the energy consumption of the installations by an interactive platform: DESC.

- **Multiple skills at the very heart of the industry decarbonation and of the energy efficiency:** climatic and electric engineering, cooling, compressed air,…

---

**ENVIROMENTAL PERFORMANCE**

Dalkia enables its customers to reduce their greenhouse gas emissions while developing renewable and recovery energies locally, et working on energy efficiency and the reduction of consumption.

- 57.7% of renewable energies and recovery of heat networks\(^{(1)}\) in 2020
- 4 million tons \(\text{CO}_2\) avoided\(^{(2)}\) in 2021

---

\(^{(1)}\) Networks in France (SNCU scope)
\(^{(2)}\) 3.7M tonnes excluding \(\text{CO}_2\) thanks to CHP
DALKIA: TAILOR-MADE SOLUTIONS

SPECIALTY SUBSIDIARIES

- **Dalkia Electrotechnics**
  - Electrical engineering

- **Dalkia Biogaz**
  - Valorisation of biogas

- **Dalkia Air Solutions**
  - Nitrogen compressed air and air production

- **Dalkia Froid Solutions**
  - Industrial and commercial refrigeration

- **Dalkia Smart Building**
  - Design and realization of energy efficiency solutions

- **Dalkia EN**
  - Industrial and tertiary maintenance in nuclear sector

- **Other subsidiary**
  - Building energy services

EDF 2021 FACTS & FIGURES
**DALKIA: INNOVATIVE PROJECTS**

**SIGNATURE OF A PUBLIC-PRIVATE PARTNERSHIP WITH SNCF GARES & CONNEXIONS** (1) TO DEVELOP A NEW SOLUTION FOR THE MANAGEMENT OF THE RAIL STATIONS

- **Objectives:** 12-year partnership to design, develop and roll out the "BIM OMM" tool, aiming at transforming and simplifying Operation & Maintenance of train stations. The platform will provide, in real time, digital twins of 122 rail stations, this making possible to rethink in a more sustainable, economical and ecological way the management of all buildings

- **BIM OMM technology:** process of updating and using data (2) from the digital model, through which all data on building's current state and new development are collected in real time. This is known as digital twinning. BIM OMM enable to plan, predict and optimise all type of technical work on rail stations

**PARTNERSHIP WITH FUTUROSCOPE** (3) FOR THE CREATION OF A GREEN HEATING AND AIR CONDITIONING NETWORK

- **Objectives:** Environmental programme, digital management solutions and energy performance upgrades will allow to reduce Futuroscope’s greenhouse gas emissions by 40% and to reduce its fossil fuel consumption by 30%

- **Technologies:** heat and cold will be produced by thermorefrigerating pumps (technology similar to heat pumps). It will use a local renewable energy collecting heat from an aquifer via a heat exchanger. Production plant will itself be powered by solar electricity from canopies with photovoltaic panels in the Futuroscope carpark

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(1) For more information, see Dalkia’s press release of 2 September 2021  
(2) From the boiler model to the location of the windows and all the cables and pipes in the building  
(3) For more information, see Dalkia’s press release of 3 September 2021
Smart and efficient lighting reference, Dalkia Electrotechnics / Citelum has developed a whole range of connected services to meet the new challenges of its public and industrial customers: energy saving, security, mobility, attractiveness, sustainable development, etc.

Projects and expertise across the value chain, from design to operation

An innovation pole based on:

- Reliable technological partners: manufacturers in lighting, security, mobility, IoT sectors..., start-ups
- the collaborative platform for urban space management, MUSE®, developed by Dalkia Electrotechnics / Citelum subsidiary Citégestion, now available on the Microsoft Azure Cloud

Dalkia Electrotechnics / Citelum Services

Ranges to suit all needs and customer profiles:

- **Smart lighting**: renovation, interior lighting, remote management, artistic lighting etc.
- **Security**: Video protection, traffic light and speed radars, warning systems, etc.
- **Mobility**: traffic light system, smart parking, electric vehicle charging solutions, etc.
- **Communication and information**: variable message signs, Wi-Fi, Li-Fi etc.
- **Quality of life**: air quality, noise sensors, etc.

Smart and connected infrastructures

Dalkia Electrotechnics / Citelum builds, with and for its customers, **Smart City** projects that are tailored to their needs and focused on the quality of life of citizens.

In 2021, Dalkia Electrotechnics / Citelum and Eiffage, as a consortium, won a **City of Paris** contract for public lighting, traffic light systems and festive and architectural lighting.

The contract provides for the replacement of 12,000 street lighting media and 21,000 signage media and signs, the replacement of 70,000 LED lighting sources, and the renovation of 870 kilometres of electricity grid.

In this respect, a combined total of 240GWh of energy savings will be made in ten years, for a 30% reduction in current street lighting consumption, from as early as the fifth year of the contract.

The implementation of the project will include a CSR component engaging the group to limit its own CO2 emissions and act in favour of employment by offering 600,000 hours of professional integration to people isolated from the job market.
EDF GROUP MAIN BUSINESSES

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➢ RENEWABLES  P. 112
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➢ ENERGY SERVICES  P. 181
➢ GAS  P. 188
EDF IS WELL POSITIONED ON THE GAS VALUE CHAIN

- Dual-fuel offers (electricity and gas) and value added services to clients
- Supply of gas fired power plants
- Seeking arbitrages and optimising supply strategies
- Manage flexibility and regulated activity in Italy
- Examples: Cellino, Collalto and San Potito & Cotignola (Italy), Etzel storage (Germany)
- 6 gas import contracts
- 1 LT LNG contract (USA) from 2023
- Small scale LNG to reduce emissions in heavy and maritime transport
- LT LNG regassification capacity available in France, Italy and Belgium
- Development of import infrastructures
- New gas uses and green gas
- Norwegian E&P assets sold in March 2021.
- Divestment of Algeria planned at a later date

---

Main gas downstream markets
Gas pipelines under development
Gas pipelines under construction
LNG storage inaugurated in October 2021
LNG storage under development
1 LNG vessel under construction (174k cubic meters)
1 LNG vessel inaugurated in October 2021 (30k cubic meters)
GAS SUPPLY SOURCES AS OF TODAY

Gas supply long-term contracts

- The total volume of EDF’s long-term gas contracts is 13.9bcm/year\(^{(1)}\), of which 12.4bcm imported by Edison

<table>
<thead>
<tr>
<th>Supplying country: USA</th>
<th>Supplying country: Qatar</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Counterpart: Equinor ASA</td>
<td>✓ Counterpart: RasGas II</td>
</tr>
<tr>
<td>✓ Delivery: Pipe</td>
<td>✓ Delivery: LNG</td>
</tr>
<tr>
<td>✓ Quantity(^{(1)}): 0.5Bcm/y</td>
<td>✓ Quantity(^{(1)}): 6.4Bcm/y</td>
</tr>
<tr>
<td>✓ Expiration: 2025</td>
<td>✓ Expiration: 2027</td>
</tr>
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</table>

<table>
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<th>Supplying country: Norway</th>
<th>Supplying country: Azerbaidjan (^{(2)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Counterpart: Equinor ASA</td>
<td>✓ Counterpart: AGSC</td>
</tr>
<tr>
<td>✓ Delivery: Pipe</td>
<td>✓ Delivery: Pipe</td>
</tr>
<tr>
<td>✓ Quantity(^{(1)}): 1Bcm/y</td>
<td>✓ Quantity(^{(1)}): 18Bcm/y</td>
</tr>
<tr>
<td>✓ Expiration: 2025</td>
<td>✓ Expiration: 2027</td>
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<table>
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<tr>
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<th>Supplying country: Algeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Counterpart: Cheniere (Corpus Christi – Texas)</td>
<td>✓ Counterpart: Sonatrach</td>
</tr>
<tr>
<td>✓ Delivery: Pipe</td>
<td>✓ Delivery: Pipe</td>
</tr>
<tr>
<td>✓ Quantity(^{(1)}): 1Bcm/y</td>
<td>✓ Quantity(^{(1)}): 18Bcm/y</td>
</tr>
<tr>
<td>✓ Expiration: 2025</td>
<td>✓ Expiration: 2027</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplying country: Libya</th>
<th>Supplying country: Azerbaidjan (^{(2)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Counterpart: Ventu Global</td>
<td>✓ Counterpart: Eni NA</td>
</tr>
<tr>
<td>✓ Delivery: LNG</td>
<td>✓ Delivery: Pipe</td>
</tr>
<tr>
<td>✓ Quantity(^{(1)}): 1,4Bcm/y</td>
<td>✓ Quantity(^{(1)}): 4Bcm/y</td>
</tr>
<tr>
<td>✓ Start: 2022</td>
<td>✓ Expiration: 2027</td>
</tr>
<tr>
<td>✓ Expiration: 2043</td>
<td>✓ Expiration: 2028</td>
</tr>
</tbody>
</table>

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\(^{(1)}\) Annual contracted quantities  
\(^{(2)}\) Starting date: 2022
EDF is present on the European gas market for over 10 years, with ~6m clients and ~172TWh sold

Dual fuel offer with value added services

---

(1) Excluding Corsica and the French overseas department
(2) Excluding Northern Ireland
Sustainable finance is core to the Group’s financing strategy. EDF is a leading issuer in the Green Bonds and now social bond market with the equivalent of €10 billion issued since 2013. The Group is investing massively in the energy transition through investments in decarbonised production methods (nuclear and renewable), networks, the development of energy services, the deployment of smart meters, etc.
FINANCE

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➢ 2021 RESULTS P. 199

➢ FOCUS ON CREDIT P. 212

➢ PROVISIONS & DEDICATED ASSETS P. 221

➢ CSPE P. 237
EBITDA evolution

In millions of euros

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>16,614</td>
</tr>
<tr>
<td>2017</td>
<td>13,742</td>
</tr>
<tr>
<td>2018</td>
<td>15,265</td>
</tr>
<tr>
<td>2019</td>
<td>16,708</td>
</tr>
<tr>
<td>2020</td>
<td>16,174</td>
</tr>
<tr>
<td>2021</td>
<td>18,005</td>
</tr>
</tbody>
</table>

2021 Group EBITDA by segment

- **FRANCE – GENERATION AND SUPPLY ACTIVITIES**: 41.1%
- **FRANCE – REGULATED ACTIVITIES**: 33.3%
- **OTHER ACTIVITIES**: 2.1%
- **DALKIA**: 10.1%
- **OTHER INTERNATIONAL**: 1.7%
- **FRAMATOME**: 1.5%
- **ITALY**: 5.8%
- **UNITED KINGDOM**: -0.1%

Note: presented figures are pro forma data from one year to another, but are not restated consistently throughout all years.

(1) Regulated activities: Enedis, ÉS and island activities; Enedis, an independent EDF subsidiary as defined in the French energy code.
HISTORICAL FINANCIALS: NET INCOME

Evolution of Net income excluding non-recurring items

In millions of euros

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>4,085</td>
<td>2,820</td>
<td>2,452</td>
<td>3,871</td>
<td>1,969</td>
<td>4,717</td>
</tr>
</tbody>
</table>

Evolution of Net income – Group share

In millions of euros

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>2,851</td>
<td>3,173</td>
<td>1,177</td>
<td>5,155</td>
<td>650</td>
<td>5,113</td>
</tr>
</tbody>
</table>

Net income excluding non-recurring items = Net income Group share excluding non-recurring items

Note: presented figures are pro forma data from one year to another, but are not restated consistently throughout all years.
HISTORICAL FINANCIALS: INVESTMENTS AND OPEX

Net investments (1)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (in millions of euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>12,801</td>
</tr>
<tr>
<td>2017</td>
<td>16,003</td>
</tr>
<tr>
<td>2018</td>
<td>14,044</td>
</tr>
<tr>
<td>2019</td>
<td>14,015</td>
</tr>
<tr>
<td>2020</td>
<td>14,145</td>
</tr>
<tr>
<td>2021</td>
<td>15,725</td>
</tr>
</tbody>
</table>

OPEX organic change (2)

<table>
<thead>
<tr>
<th>Year</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>-2.0%</td>
</tr>
<tr>
<td>2017</td>
<td>-1.5%</td>
</tr>
<tr>
<td>2018</td>
<td>-0.3%</td>
</tr>
<tr>
<td>2019</td>
<td>-0.1%</td>
</tr>
<tr>
<td>2020</td>
<td>-0.4%</td>
</tr>
<tr>
<td>2021</td>
<td>+2.7%</td>
</tr>
</tbody>
</table>

Note: presented figures are pro forma data from one year to another, but are not restated consistently throughout all years.

(1) Total net investments (as defined for each year) excluding disposals of strategic assets.

➢ 94% of Group investments were in line with the Group’s net-zero trajectory.

(2) Aggregate of personnel expenses and other external expenses. Data published with organic change at constant scope and exchange rates.
HISTORICAL FINANCIALS: FINANCIAL DEBT

Net debt and net debt/EBITDA evolution

Debt maturity and coupon evolution

In millions of euros

<table>
<thead>
<tr>
<th>Year</th>
<th>Net debt</th>
<th>Net debt/EBITDA</th>
<th>Average maturity of gross debt (in years)</th>
<th>Average coupon</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>37,425</td>
<td>2.3</td>
<td>2.73%</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>33,015</td>
<td>2.4</td>
<td>2.95%</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>33,388</td>
<td>2.2</td>
<td>2.87%</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>41,133</td>
<td>2.5</td>
<td>2.69%</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>42,290</td>
<td>2.6</td>
<td>2.69%</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>42,988</td>
<td>2.4</td>
<td>2.06%</td>
<td></td>
</tr>
</tbody>
</table>
**Dividend payout ratio evolution (1)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>60%</td>
<td>60%</td>
<td>50%</td>
<td>14%</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

**Dividend per share evolution**

In euro per share

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim dividend</td>
<td>€0.90</td>
<td>€0.46</td>
<td>€0.31</td>
<td>€0.15</td>
<td>€0.21</td>
<td>€0.28</td>
</tr>
<tr>
<td>Final dividend</td>
<td>0.50</td>
<td>0.31</td>
<td>0.16</td>
<td>0.15</td>
<td>0.21</td>
<td>0.30</td>
</tr>
</tbody>
</table>

---

(1) Payout ratio applied to the Net result excluding non-recurring items adjusted for interest payments on hybrid issues booked in equity

(2) Cf Press release of 2 April 2020 : Board of Directors decision not to carry out the distribution of the balance of the dividend due to Covid-19 health crisis
FINANCE

➢ HISTORIC DATA  P. 193

➢ 2021 RESULTS  P. 199

➢ FOCUS ON CREDIT  P. 212

➢ PROVISIONS & DEDICATED ASSETS  P. 221

➢ CSPE  P. 237
## KEY FIGURES 2021 - ALL FINANCIAL TARGETS ACHIEVED

In €m | 2020 | 2021 | Δ % | Δ % Org.(1) |
--- | --- | --- | --- | --- |
Sales | 69,031 | 84,461 | +22.4 | +21.6 |
EBITDA | 16,174 | 18,005 | +11.3 | +11.3 |
Net income excluding non-recurring items | 1,969 | 4,717 | x2.4 |
Net income – Group share | 650 | 5,113 | -x8 |

### PROPOSED DIVIDEND

€0.58 per share

PAYOUT RATIO OF 45% (2)

The French State has committed to scrip dividend

(1) Organic change at comparable scope, standards and exchange rates.
(2) Payout ratio based on net income excluding non-recurring items, adjusted for the remuneration of hybrid bonds accounted for in equity.
### SIMPLIFIED INCOME STATEMENT

In millions of euros

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>69,031</td>
<td>84,461</td>
</tr>
<tr>
<td>Fuel and energy purchases</td>
<td>(32,425)</td>
<td>(44,299)</td>
</tr>
<tr>
<td>Other external expenses</td>
<td>(8,461)</td>
<td>(8,595)</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>(13,957)</td>
<td>(14,494)</td>
</tr>
<tr>
<td>Taxes other than income taxes</td>
<td>(3,797)</td>
<td>(3,330)</td>
</tr>
<tr>
<td>Other operating income and expenses</td>
<td>5,783</td>
<td>4,262</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>16,174</td>
<td>18,005</td>
</tr>
<tr>
<td>Impact of the commodities volatility</td>
<td>(175)</td>
<td>(215)</td>
</tr>
<tr>
<td>Amortisation/depreciation expenses and provisions for renewal</td>
<td>(10,838)</td>
<td>(10,789)</td>
</tr>
<tr>
<td>(Impairment)/reversals</td>
<td>(799)</td>
<td>(653)</td>
</tr>
<tr>
<td>Other income and expenses</td>
<td>(487)</td>
<td>(1,123)</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td>3,875</td>
<td>5,225</td>
</tr>
<tr>
<td>Financial income</td>
<td>(2,582)</td>
<td>360</td>
</tr>
<tr>
<td>Income before taxes of consolidated companies</td>
<td>1,293</td>
<td>5,585</td>
</tr>
<tr>
<td><strong>Net income – Group share</strong></td>
<td>650</td>
<td>5,113</td>
</tr>
<tr>
<td><strong>Net income excl. non-recurring items</strong>$^{(1)}$</td>
<td>1,969</td>
<td>4,717</td>
</tr>
</tbody>
</table>

---

$^{(1)}$ Excluding non-recurring items & commodities volatility
## CHANGE IN SALES (1)

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>2020</th>
<th>Forex</th>
<th>Scope</th>
<th>Organic growth</th>
<th>2021</th>
<th>Δ% org. (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France – Generation and supply activities</td>
<td>28,361</td>
<td>-</td>
<td>1</td>
<td>4,820</td>
<td>33,182</td>
<td>+17.0</td>
</tr>
<tr>
<td>France – Regulated activities (3)</td>
<td>16,228</td>
<td>-</td>
<td>-</td>
<td>1,336</td>
<td>17,564</td>
<td>+8.2</td>
</tr>
<tr>
<td>Framatome</td>
<td>3,295</td>
<td>(22)</td>
<td>27</td>
<td>62</td>
<td>3,362</td>
<td>+1.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>9,041</td>
<td>306</td>
<td>5</td>
<td>762</td>
<td>10,114</td>
<td>+8.4</td>
</tr>
<tr>
<td>Italy</td>
<td>5,967</td>
<td>-</td>
<td>(13)</td>
<td>5,258</td>
<td>11,212</td>
<td>+88.1</td>
</tr>
<tr>
<td>Other international</td>
<td>2,420</td>
<td>(43)</td>
<td>295</td>
<td>681</td>
<td>3,353</td>
<td>+28.1</td>
</tr>
<tr>
<td>EDF Renewables</td>
<td>1,582</td>
<td>(6)</td>
<td>(3)</td>
<td>194</td>
<td>1,767</td>
<td>+12.3</td>
</tr>
<tr>
<td>Dalkia</td>
<td>4,212</td>
<td>13</td>
<td>(35)</td>
<td>1,006</td>
<td>5,196</td>
<td>+23.9</td>
</tr>
<tr>
<td>Other activities</td>
<td>2,127</td>
<td>(10)</td>
<td>(3)</td>
<td>1,791</td>
<td>3,905</td>
<td>+82.2</td>
</tr>
<tr>
<td>Inter-segment eliminations</td>
<td>(4,202)</td>
<td>-</td>
<td>-</td>
<td>(992)</td>
<td>(5,194)</td>
<td>+23.6</td>
</tr>
<tr>
<td><strong>Total Group</strong></td>
<td><strong>69,031</strong></td>
<td><strong>238</strong></td>
<td><strong>274</strong></td>
<td><strong>14,918</strong></td>
<td><strong>84,461</strong></td>
<td><strong>+21.6</strong></td>
</tr>
</tbody>
</table>

(1) Breakdown of sales across the segments, before inter-segment eliminations
(2) Organic change at constant scope and exchange rates
(3) Regulated activities: Enedis, ÉS and island activities; Enedis, an independant EDF subsidiary as defined in the French energy code
### CHANGE IN EBITDA (1)

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>2020</th>
<th>Forex</th>
<th>Scope</th>
<th>Organic growth</th>
<th>2021</th>
<th>Δ% org. (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France – Generation and supply activities</td>
<td>7,412</td>
<td>-</td>
<td>3</td>
<td>(21)</td>
<td>7,394</td>
<td>-0.3</td>
</tr>
<tr>
<td>France – Regulated activities (3)</td>
<td>5,206</td>
<td>-</td>
<td>-</td>
<td>786</td>
<td>5,992</td>
<td>+15.1</td>
</tr>
<tr>
<td>Framatome</td>
<td>271</td>
<td>(3)</td>
<td>(8)</td>
<td>50</td>
<td>310</td>
<td>+18.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>823</td>
<td>28</td>
<td>17</td>
<td>(889)</td>
<td>(21)</td>
<td>-108.0</td>
</tr>
<tr>
<td>Italy</td>
<td>683</td>
<td>-</td>
<td>1</td>
<td>362</td>
<td>1,046</td>
<td>+53.0</td>
</tr>
<tr>
<td>Other international</td>
<td>380</td>
<td>(10)</td>
<td>(16)</td>
<td>(87)</td>
<td>267</td>
<td>-22.9</td>
</tr>
<tr>
<td>EDF Renewables</td>
<td>848</td>
<td>(3)</td>
<td>1</td>
<td>(31)</td>
<td>815</td>
<td>-3.7</td>
</tr>
<tr>
<td>Dalkia</td>
<td>290</td>
<td>(1)</td>
<td>(3)</td>
<td>92</td>
<td>378</td>
<td>+31.7</td>
</tr>
<tr>
<td>Other activities</td>
<td>261</td>
<td>(2)</td>
<td>2</td>
<td>1,563</td>
<td>1,824</td>
<td>x7</td>
</tr>
<tr>
<td><strong>Total Group</strong></td>
<td><strong>16,174</strong></td>
<td><strong>9</strong></td>
<td><strong>(3)</strong></td>
<td><strong>1,825</strong></td>
<td><strong>18,005</strong></td>
<td><strong>+11.3</strong></td>
</tr>
</tbody>
</table>

(1) Contribution to the Group  
(2) Organic change at constant scope, standard and exchange rates  
(3) Regulated activities: Enedis, ÉS and island activities; Enedis, an independant EDF subsidiary as defined in the French energy code
BREAKDOWN OF GROUP EBITDA

2020

- 32.2% FRANCE – REGULATED ACTIVITIES (1)
- 45.8% FRANCE – GENERATION AND SUPPLY ACTIVITIES
- 2.3% OTHER INTERNATIONAL
- 5.1% UNITED KINGDOM
- 1.7% FRAMATOME
- 1.6% OTHER ACTIVITIES

2021

- 33.3% FRANCE – REGULATED ACTIVITIES (1)
- 41.1% FRANCE – GENERATION AND SUPPLY ACTIVITIES
- 4.5% EDF RENEWABLES
- 1.5% OTHER INTERNATIONAL
- 5.8% ITALY
- -0.1% UNITED KINGDOM
- 1.7% FRAMATOME
- 1.8% DALKIA
- 2.1% DALKIA
- 10.1% OTHER ACTIVITIES

(1) Regulated activities: Enedis, ÉS and island activities; Enedis, an independant EDF subsidiary as defined in the French energy code
**REGULATORY MEASURES IMPACTS TO 2022 EBITDA**

Measures’ EBITDA impact according to published decree on 12 March 2022 based on an average of forward market prices between 2 and 23 December 2021 (257€/MWh):

- An additional 20TWh of ARENH at €46.2/MWh to be delivered from April to December 2022 to alternative suppliers whose demand was capped following the end-2021 auction: impact estimated at around -€4.2bn
- The impact of this additional allocation is replicated in EDF offers (regulated tariffs and market offers): impact estimated at around -€4.5bn
- Margin level freeze in €/MWh for residential regulated tariffs: impact estimated at around -€0.6bn
- Portion of the 2022 residential regulated tariff postponed to 2023, aiming at limiting the increase to 4% including taxes and an extension of residential regulated tariff measures to the professional regulated tariff and non-interconnected zones (freeze in margin level and tariff postponement): impact estimated at around -€0.9bn

---

**EBITDA impact** (1) in €bn depending on market price

- 31 December 2021:
  - Rise of ARENH ceiling: -6.4
  - Tariff postponement: -1.4
- 12 March 2022:
  - Rise of ARENH ceiling: -8.7
  - Tariff postponement: -0.6
  - Freeze on margin level of residential regulated tariff in €/MWh: -0.9

---

(1) Illustrative figures

- Rise of ARENH ceiling
- Tariff postponement
- Freeze on margin level of residential regulated tariff in €/MWh
## NET INCOME EXCL. NON-RECURRING ITEMS

<table>
<thead>
<tr>
<th></th>
<th>In €m</th>
<th>2020 current</th>
<th>2020 non current</th>
<th>2020</th>
<th>2021 Current</th>
<th>2021 non current</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EBITDA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commodities volatility</td>
<td></td>
<td>-</td>
<td>175</td>
<td>(175)</td>
<td>-</td>
<td>215</td>
<td>(215)</td>
</tr>
<tr>
<td>Amortisation/depreciation expenses and provisions for renewal</td>
<td>(10,568)</td>
<td>270</td>
<td>(10,838)</td>
<td>(10,789)</td>
<td>-</td>
<td>(10,789)</td>
<td></td>
</tr>
<tr>
<td>Impairments and other operating income and expenses</td>
<td></td>
<td>-</td>
<td>1,286</td>
<td>(1,286)</td>
<td>-</td>
<td>1,776</td>
<td>(1,776)</td>
</tr>
<tr>
<td><strong>EBIT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial result</td>
<td>(3,705)</td>
<td>(1,123)</td>
<td>(2,582)</td>
<td>(2,437)</td>
<td>(2,797)</td>
<td>360</td>
<td></td>
</tr>
<tr>
<td>Income tax</td>
<td>(361)</td>
<td>584</td>
<td>(945)</td>
<td>(1,019)</td>
<td>381</td>
<td>(1,400)</td>
<td></td>
</tr>
<tr>
<td>Share of net income from associates and joint-ventures</td>
<td>547</td>
<td>122</td>
<td>425</td>
<td>787</td>
<td>143</td>
<td>644</td>
<td></td>
</tr>
<tr>
<td>Net income of discontinued operations</td>
<td>(41)</td>
<td>117</td>
<td>(158)</td>
<td>(1)</td>
<td>-</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>Deduction net income from minority interests</td>
<td>77</td>
<td>112</td>
<td>(35)</td>
<td>(171)</td>
<td>114</td>
<td>(285)</td>
<td></td>
</tr>
<tr>
<td><strong>Net income – Group share</strong></td>
<td>1,969</td>
<td>1,319</td>
<td>650</td>
<td>4,717</td>
<td>(396)</td>
<td>5,113</td>
<td></td>
</tr>
</tbody>
</table>
## SIMPLIFIED BALANCE SHEET

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>31/12/2020</th>
<th>31/12/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangible and tangible assets</td>
<td>179,658</td>
<td>188,416</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>57,574</td>
<td>67,452</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td><strong>237,232</strong></td>
<td><strong>255,868</strong></td>
</tr>
<tr>
<td>Inventories and trade receivables</td>
<td>29,259</td>
<td>38,432</td>
</tr>
<tr>
<td>Other current assets</td>
<td>30,834</td>
<td>56,678</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>6,270</td>
<td>9,919</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td><strong>66,363</strong></td>
<td><strong>105,029</strong></td>
</tr>
<tr>
<td>Assets held for sale</td>
<td>2,296</td>
<td>69</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>305,891</strong></td>
<td><strong>360,966</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES</th>
<th>31/12/2020</th>
<th>31/12/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (EDF’s share)</td>
<td>45,633</td>
<td>50,211</td>
</tr>
<tr>
<td>Equity (non-controlling interests)</td>
<td>9,593</td>
<td>11,778</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td><strong>55,226</strong></td>
<td><strong>61,989</strong></td>
</tr>
<tr>
<td>Non-current provisions</td>
<td>85,837</td>
<td>89,225</td>
</tr>
<tr>
<td>Special distribution concession</td>
<td>48,420</td>
<td>48,853</td>
</tr>
<tr>
<td>liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-current other liabilities</td>
<td>63,888</td>
<td>63,760</td>
</tr>
<tr>
<td><strong>Non current liabilities</strong></td>
<td><strong>198,145</strong></td>
<td><strong>201,838</strong></td>
</tr>
<tr>
<td>Current liabilities</td>
<td>52,412</td>
<td>97,109</td>
</tr>
<tr>
<td>Liabilities related to assets</td>
<td>108</td>
<td>30</td>
</tr>
<tr>
<td>classified as held for sale</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>305,891</strong></td>
<td><strong>360,966</strong></td>
</tr>
</tbody>
</table>
## CHANGE IN CASH FLOW

<table>
<thead>
<tr>
<th>In €m</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EBITDA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-cash items</td>
<td>328</td>
<td>(869)</td>
</tr>
<tr>
<td><strong>EBITDA Cash</strong></td>
<td>16,502</td>
<td>17,136</td>
</tr>
<tr>
<td><strong>∆ WCR</strong></td>
<td>(1,679)</td>
<td>(1,526)</td>
</tr>
<tr>
<td>Net investments <em>(including HPC and Linky (2), excluding Group assets disposal plan)</em></td>
<td>14,145</td>
<td>15,725</td>
</tr>
<tr>
<td>Other items o/w dividends received from associates and group ventures</td>
<td>(17)</td>
<td>(98)</td>
</tr>
<tr>
<td><strong>Cash flow generated by operations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group assets disposal plan</td>
<td>187</td>
<td>187</td>
</tr>
<tr>
<td>Income tax paid</td>
<td>(983)</td>
<td>(2,276)</td>
</tr>
<tr>
<td>Net financial expenses disbursed</td>
<td>(929)</td>
<td>(588)</td>
</tr>
<tr>
<td>Dedicated assets</td>
<td>(828)</td>
<td>(501)</td>
</tr>
<tr>
<td>Dividends paid in cash (including hybrid bonds remuneration)</td>
<td>(768)</td>
<td>(794)</td>
</tr>
<tr>
<td><strong>Group cash flow</strong></td>
<td>(2,660)</td>
<td>(1,525)</td>
</tr>
</tbody>
</table>

(1) Linky is a project led by Enedis, independent subsidiary of EDF under the provisions of the French energy code.
INVESTMENTS: FROM GROSS TO NET (1)

Gross operating investments (2)

Mainly Edison, Luminus and Framatome

Gross financial investments

+ 694

Gross investments

- 673

Disposals except disposal plans

-1,996

Subsidies and participations and capital increase

+94

Others

Net investments before disposal plan (1)

Mainly Edison, other international and EDF Energy

Mainly EDF Renewables

Mainly EDF Renewables and EDF Energy

Total net investments

18,300

17,606 (2)

12,878

15,725 (1)

18,300

(1) Net investments in the Change in NFD statement including Linky, HPC and assets disposals

(2) Investments in intangible assets and property, plant and equipment in consolidated cash flow statement
NET TOTAL INVESTMENTS INCLUDING ACQUISITIONS, EXCLUDING 2015-2020 DISPOSAL PLAN

2020

- EDF RENEWABLES: 6%
- DALKIA: 1%
- FRAMATOME: 19%
- UNITED KINGDOM: 19%
- ITALY: 4%
- OTHER INTERNATIONAL: 1%
- OTHER ACTIVITIES: <1%

- France – Generation and Supply Activities: 29%

€14.1bn

2021

- EDF RENEWABLES: 5%
- DALKIA: 2%
- FRAMATOME: 2%
- UNITED KINGDOM: 19%
- ITALY: 6%
- OTHER INTERNATIONAL: 2%
- OTHER ACTIVITIES: <1%

- France – Generation and Supply Activities: 34%

- France – Regulated Activities: 29%

- EDF RENEWABLES: 5%

€15.7bn
NET INVESTMENTS INCLUDING ACQUISITIONS EXCLUDING 2015-2020 DISPOSAL PLAN

In billions of euros

<table>
<thead>
<tr>
<th></th>
<th>Maintenance</th>
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<tr>
<td>Other (1)</td>
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<td>TOTAL</td>
<td>7.1</td>
<td>8.6</td>
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</table>

NB: figures rounded up to the nearest decimal number

(1) Mainly thermal maintenance, gas, property, central functions,
FINANCE

➢ HISTORIC DATA P. 193
➢ 2021 RESULTS P. 199
➢ FOCUS ON CREDIT P. 212
➢ PROVISIONS & DEDICATED ASSETS P. 221
➢ CSPE P. 237
## DEBT AND LIQUIDITY

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<td><strong>Net financial debt</strong></td>
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<td><strong>Net financial debt/EBITDA</strong></td>
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<td>• Bonds</td>
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<td>• Average maturity of gross debt (in years)</td>
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<td>• Average coupon</td>
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<td><strong>Gross liquidity</strong> (1)</td>
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</table>

(1) With cash and cash equivalents, liquid assets, and undrawn lines of credit
NB: figures rounded up to the nearest whole number.

(1) Net investments excluding Group disposals.
(2) Dividends paid including hybrid bond remuneration.
(3) Hybrid issue of €1.2bn and announced repayment of €0.3bn
GROSS FINANCIAL DEBT AFTER SWAPS

BREAKDOWN BY TYPE OF RATE

- Floating rate: 30% (as of 31/12/2021)
- Fixed rate: 70% (as of 31/12/2021)

- 31% as of 31/12/2020
- 69% as of 31/12/2021

BREAKDOWN BY CURRENCY

- EUR: 71%
- GBP: 18%
- USD: 7%
- Other: 4%

- 16% as of 31/12/2020
- 73% as of 31/12/2021

(1) Mainly CHF, PLN, CAD and JPY
### Breakdown of Bond Debts by Currency

In millions of euros, before swaps

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<th>Year</th>
<th>EUR</th>
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<th>USD</th>
<th>CHF</th>
<th>JPY</th>
<th>Others</th>
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*Including (In €m equivalent)*

- **EUR**: 2022: 2,086, 2023: 1,998, 2024: 4,949, 2025: 832
- **GBP**: 2022: 442, 2023: -, 2024: -, 2025: -
- **USD**: 2022: -, 2023: -, 2024: -, 2025: 1,090
## MAIN OUTSTANDING BONDS AS OF 31 DECEMBER 2021 (1/2)

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<td>2,000</td>
<td>EUR</td>
<td>2.75%</td>
</tr>
<tr>
<td>09/2009</td>
<td>09/2024</td>
<td>2,500</td>
<td>EUR</td>
<td>4.63%</td>
</tr>
<tr>
<td>09/2020</td>
<td>09/2024</td>
<td>2,400</td>
<td>EUR</td>
<td>0.00%</td>
</tr>
<tr>
<td>10/2015</td>
<td>10/2025</td>
<td>1,250</td>
<td>USD</td>
<td>3.63%</td>
</tr>
<tr>
<td>11/2010</td>
<td>11/2025</td>
<td>750</td>
<td>EUR</td>
<td>4.00%</td>
</tr>
<tr>
<td>10/2016</td>
<td>10/2026</td>
<td>1,750</td>
<td>EUR</td>
<td>1.00%</td>
</tr>
<tr>
<td>01/2017</td>
<td>01/2027</td>
<td>107,900</td>
<td>JPY</td>
<td>1.09%</td>
</tr>
<tr>
<td>03/2012</td>
<td>03/2027</td>
<td>1,000</td>
<td>EUR</td>
<td>4.13%</td>
</tr>
<tr>
<td>09/2018</td>
<td>09/2028</td>
<td>1,800</td>
<td>USD</td>
<td>4.50%</td>
</tr>
<tr>
<td>04/2010</td>
<td>04/2030</td>
<td>1,500</td>
<td>EUR</td>
<td>4.63%</td>
</tr>
<tr>
<td>10/2018</td>
<td>10/2030</td>
<td>1,000</td>
<td>EUR</td>
<td>2.00%</td>
</tr>
<tr>
<td>07/2001</td>
<td>07/2031</td>
<td>650</td>
<td>GBP</td>
<td>5.88%</td>
</tr>
<tr>
<td>02/2003</td>
<td>02/2033</td>
<td>850</td>
<td>EUR</td>
<td>5.63%</td>
</tr>
</tbody>
</table>

(1) Date of funds reception
## MAIN OUTSTANDING BONDS AS OF 31 DECEMBER 2021 (2/2)

<table>
<thead>
<tr>
<th>Issue date (1)</th>
<th>Maturity</th>
<th>Nominal amount (in millions of currency units)</th>
<th>Currency</th>
<th>Coupon</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/2021</td>
<td>11/2033</td>
<td>1,850</td>
<td>EUR</td>
<td>1.00%</td>
</tr>
<tr>
<td>06/2009</td>
<td>06/2034</td>
<td>1,500</td>
<td>GBP</td>
<td>6.13%</td>
</tr>
<tr>
<td>10/2016</td>
<td>10/2036</td>
<td>750</td>
<td>EUR</td>
<td>1.88%</td>
</tr>
<tr>
<td>09/2018</td>
<td>09/2038</td>
<td>650</td>
<td>USD</td>
<td>4.88%</td>
</tr>
<tr>
<td>01/2009</td>
<td>01/2039</td>
<td>1,750</td>
<td>USD</td>
<td>6.95%</td>
</tr>
<tr>
<td>01/2010</td>
<td>01/2040</td>
<td>850</td>
<td>USD</td>
<td>5.60%</td>
</tr>
<tr>
<td>11/2010</td>
<td>11/2040</td>
<td>750</td>
<td>EUR</td>
<td>4.50%</td>
</tr>
<tr>
<td>10/2011</td>
<td>10/2041</td>
<td>1,250</td>
<td>GBP</td>
<td>5.50%</td>
</tr>
<tr>
<td>01/2014</td>
<td>01/2044</td>
<td>1,000</td>
<td>USD</td>
<td>4.88%</td>
</tr>
<tr>
<td>10/2015</td>
<td>10/2045</td>
<td>1,500</td>
<td>USD</td>
<td>4.75%</td>
</tr>
<tr>
<td>10/2015</td>
<td>10/2045</td>
<td>1,150</td>
<td>USD</td>
<td>4.95%</td>
</tr>
<tr>
<td>09/2018</td>
<td>09/2048</td>
<td>1,300</td>
<td>USD</td>
<td>5.00%</td>
</tr>
<tr>
<td>12/2019</td>
<td>12/2049</td>
<td>1,250</td>
<td>EUR</td>
<td>2.00%</td>
</tr>
<tr>
<td>09/2010</td>
<td>09/2050</td>
<td>1,000</td>
<td>GBP</td>
<td>5.13%</td>
</tr>
<tr>
<td>10/2016</td>
<td>10/2056</td>
<td>2,164</td>
<td>USD</td>
<td>4.99%</td>
</tr>
<tr>
<td>11/2019</td>
<td>12/2069</td>
<td>2,000</td>
<td>USD</td>
<td>4.50%</td>
</tr>
<tr>
<td>01/2014</td>
<td>01/2114</td>
<td>700</td>
<td>USD</td>
<td>6.00%</td>
</tr>
<tr>
<td>01/2014</td>
<td>01/2114</td>
<td>1,350</td>
<td>GBP</td>
<td>6.00%</td>
</tr>
</tbody>
</table>

(1) Date of funds reception
FOCUS ON HYBRIDS SECURITIES

Hybrid issues contribute to strengthening the balance sheet through their qualification as equity under IFRS and 50/50 as debt and equity by rating agencies.

New issue in May 2021 of euro-denominated hybrid notes for a total nominal amount of €1,250 million with an initial coupon of 2.625%

These issues allowed to extend the maturity of the stock of hybrids and to reduce the average coupon.

Hybrid securities snapshot following new issues (in millions of euros) (1)

- Total amount: €12.3bn (1)
- Average tenor: 4.77 years
- Average cost: 4.57%

Hybrid debt maturity schedule based on first call dates

Breakdown by currency

USD 21%
60% EUR
19% GBP

(1) Exchange rate as of transaction time
## COMPARATIVE CREDIT RATINGS

<table>
<thead>
<tr>
<th>Moody’s ratings</th>
<th>S&amp;P ratings</th>
<th>Moody’s ratings</th>
<th>Fitch ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>Vattenfall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baa1</td>
<td>EDF</td>
<td>Engie</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Iberdrola</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enel</td>
<td></td>
</tr>
<tr>
<td>Baa2</td>
<td>E.ON</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baa3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sources:
- rating agencies as of 15/04/2022
- Update of the rating and outlook of EDF Group by S&P on 21 February 2022
- Update of the rating and outlook of EDF Group by Moody’s on 21 February 2022
- Update of the rating and outlook of EDF Group by Fitch on 2 March 2022

### S&P ratings
- BBB negative
- Baa1 negative
- BBB+ negative

### Moody’s ratings
- BBB negative
- Baa1 stable
- A- stable

### Fitch ratings
- BBB+ stable
- A3 stable
- n.d.

### Companies and Ratings:
- **EDF**: BBB negative (1) Baa1 stable A- stable
- **Engie**: BBB+ stable Baa1 negative (2) A- stable
- **Vattenfall**: BBB+ positive A3 stable n.d.
- **SSE**: BBB+ stable Baa1 stable BBB stable
- **Iberdrola**: BBB+ stable Baa1 stable BBB+ stable
- **Enel**: BBB+ stable Baa1 stable BBB+ stable
- **E.ON**: BBB+ stable Baa2 stable BBB+ stable
- **Uniper**: BBB Watch negative n.d. n.d.
- **RWE**: n.d Baa2 stable BBB+ stable

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**2021 FACTS & FIGURES**

**FINANCE FOCUS ON CREDIT**
FINANCE

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➢ PROVISIONS & DEDICATED ASSETS
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➢ CSPE
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## GROUP PROVISIONS

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>31 December 2020</th>
<th>31 December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Non Current</td>
</tr>
<tr>
<td>Provisions for back-end nuclear cycle</td>
<td>1,430</td>
<td>26,137</td>
</tr>
<tr>
<td>Provisions for nuclear decommissioning and last cores</td>
<td>723</td>
<td>32,196</td>
</tr>
<tr>
<td>Other provisions for decommissioning</td>
<td>120</td>
<td>1,744</td>
</tr>
<tr>
<td>Provisions for employee benefits</td>
<td>879</td>
<td>22,130</td>
</tr>
<tr>
<td>Other provisions</td>
<td>2,675</td>
<td>3,630</td>
</tr>
<tr>
<td><strong>Total Provisions</strong></td>
<td>5,827</td>
<td>85,837</td>
</tr>
</tbody>
</table>
GROUP PROVISIONS FOR EMPLOYEE BENEFITS: CHANGE IN NET LIABILITY

In millions of euros

2021 net expense

- 1,407

Actuarial differences

Employer's contribution to funds

- 273

Benefits paid

- 892

Conversion differences

- 123

Other variations

- 128

31/12/2020

21,284 (1)

31/12/2021

19,775 (2)

(1) Including: provisions for employee benefits €23,009m and non-current financial assets €(1,725)m

(2) Including: provisions for employee benefits €22,508m and non-current financial assets €(2,733)m
GROUP NUCLEAR PROVISIONS

In millions of euros

<table>
<thead>
<tr>
<th>Year</th>
<th>Allowances</th>
<th>Reductions</th>
<th>Discount effect</th>
<th>Other changes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/12/2020</td>
<td>+1,603</td>
<td>-2,466</td>
<td>+3,068</td>
<td>+ 2,081</td>
<td>60,486</td>
</tr>
<tr>
<td>31/12/2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64,772</td>
</tr>
</tbody>
</table>

Mainly France:
- Operating provisions related to committed fuels
- Update of the hypothesis on the provisions of management of nuclear fuel

Mainly:
- Forex translation adjustments +€1.1bn
- Effects of changes in the net discount rate on asset-backed provisions in France: +€0.5bn
- Extension of the amortisation period for 1,300MW series plants in France on 1 January 2021: €(1)bn
- Update of the assumptions for the valuation of provisions for deconstruction in the UK: +€1.2bn with NFL and British government debt counterparty

(1) See note 15.1.1.1 of the consolidated financial statements at 31 December 2021
(2) Impacts on the income statement of which France +€2,091m (+€1,474m of discount unwinding and +€617m of effects of changes in the real discount rate on provisions not backed by assets) and United Kingdom +€968m (accretion – note a symmetrical effect linked to the accretion of receivables from the Nuclear Liabilities Fund (NLF) and the British Government leading to an effect on the income statement)
### FRANCE NUCLEAR PROVISIONS

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>31/12/2020</th>
<th>Net allowances</th>
<th>Discount effect</th>
<th>Other changes (1)</th>
<th>31/12/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total provisions for back-end nuclear cycle</strong></td>
<td>24,622</td>
<td>(198)</td>
<td>1,359</td>
<td>269</td>
<td>26,052</td>
</tr>
<tr>
<td>Provisions for management of spent fuel</td>
<td>11,322</td>
<td>(97)</td>
<td>505</td>
<td>89</td>
<td>11,819</td>
</tr>
<tr>
<td>Provisions for long-term management of radioactive waste</td>
<td>13,300</td>
<td>(101)</td>
<td>854</td>
<td>180</td>
<td>14,233</td>
</tr>
<tr>
<td><strong>Total provisions for nuclear dismantling and last cores</strong></td>
<td>20,200</td>
<td>76</td>
<td>732</td>
<td>(618)</td>
<td>20,390</td>
</tr>
<tr>
<td>Provisions for dismantling power stations</td>
<td>17,489</td>
<td>76</td>
<td>649</td>
<td>(484)</td>
<td>17,730</td>
</tr>
<tr>
<td>Provisions for last cores</td>
<td>2,711</td>
<td>-</td>
<td>83</td>
<td>(134)</td>
<td>2,660</td>
</tr>
<tr>
<td><strong>TOTAL FRANCE NUCLEAR PROVISIONS</strong></td>
<td>44,822</td>
<td>(122)</td>
<td>2,091</td>
<td>(349)</td>
<td>46,442</td>
</tr>
</tbody>
</table>

NB: Regarding the allocation to Dedicated Assets for nuclear provisions coverage, please refer to the slide “Dedicated Assets” on p.234

(1) Other changes include changes in asset-backed provisions. These changes are not included in the income statement.
FRANCE NUCLEAR PROVISIONS

In millions of euros

31/12/2020

44,822

Alliances

+1,573

Reductions

-1,695

Discount unwinding

+1,474

Net discount rate variation (2)

+1,112

Other changes

-844

31/12/2021

46,442

Mainly:

• Operating provisions related to committed fuels
• Update of the hypothesis on the provisions of management of nuclear fuel (1)

Mainly:

• reversals of provisions linked to uses
• partial reversal of the reprocessed uranium storage provision (1)

Mainly extension of the amortisation period for 1,300MW series plants in France on 1 January 2021:
€(1,031)m (3)

Balanced sheet asset effect: +€495m
P&L financial expenses: +€617m

(1) See note 15.1.1.1 of the consolidated financial statements at 31 December 2021
(2) Effects of a change in net discount rate for France:
- for provisions with no related assets: impact on P&L
- for provisions with related assets (matching assets and underlying assets): impact on balance sheet
(3) See note 1.4.1 2021 of the consolidated financial statements at 31 December 2021
FRANCE NUCLEAR PROVISIONS: 2015-2021 CHANGES

Decommissioning costs plants in operation

- Conclusions of the external audit commissioned by the DGEC on the cost of decommissioning published in January 2016 (1), stating that the overall audit confirms EDF’s estimate of the cost of decommissioning its nuclear fleet.
- Three-year review of the cost assessment for dismantling first-generation plants to incorporate lessons learned from current sites.
- Extensive revision of the cost estimate for the decommissioning of the plants in operation, taking into account the DGEC audit recommendations.
- Limited changes of the cost estimate and related provisions: €0.5bn (2)
- Having thoroughly revised the estimate, EDF continues to undertake an international comparison to back up its analyses taking care to identify and characterize a number of factors that could distort direct comparisons. These include differences in the scope of the estimates or in the national (for example in France, this includes the number of plants) and regulatory contexts.
- Since its revision, the estimate has been subject to an annual review which, in 2017, 2018, 2019 and 2020 resulted in no-material adjustments.

Decommissioning costs closed plants

- Update to the industrial dismantling scenario for GCR reactors (2):
  - Dismantling of the caissons (reactor buildings) in the open air, and no longer under water.
  - Lessons learned from dismantling a first caisson before commencing operations on the five others.
- Provisions increased by €0.3 billion.
- Update of the evaluation of the decommissioning costs of the 1st generation plants.
- These annual studies confirm the changes previously made and do not lead to a significant change in the provisions.
- Independent expert review required by the French nuclear safety authority (ASN). EDF’s main choices were ratified hearing by the ASN college in June Strategy dossier, DOS (2) on the secure configuration and detailed 2017-2022 schedule sent at the end of December.
- The ASN sent its main questions and conclusions on the UNGG strategy dossier. Dismantling in the air, advantage of industrial demonstrator and the schedule for the first dismantled reactor (Chirn A2) seem to be approved.
- Discussions continue on the schedule for dismantling the five other reactors.
- Taking into account the decision projects + €108M in the IA decommissioning provisions.

GCR (R): Annual estimate review → non-material adjustments

  - The ASN recognises the complexity of the operations to be carried out and the merits of the EDF risk control strategy. It calls for a slight acceleration of the work on the five reactors following the first series.
- Continuing the design studies (ANDRA).
  - French Finance Act for 2021 (the French Finance Act) provides for a change in project taxation (transition from common law taxation to a storage tax). The French government still needs to clarify and administer legal provisions associated with the request for a declaration of public utility (DUP).
  - The French government still needs to clarify and administer legal provisions associated with the request for a declaration of public utility (DUP).
  - ANDRA planning request for the creation of CIGEO in 2020, industrial pilot phase by 2030, reception of the first waste packages maintained for 2031.
  - Finalisation in July of the external audit at the request of the French Department for Energy and Climate to assess the decommissioning of shut down EDF nuclear facilities. The report, posted online on the site of the French Ecological Transition Ministry in November 2021, considers the process of costing and annual review as robust, and confirms the adequate sizing of charges and provisions on the scope of the audit.

Cost of the Cigéo project

- The Costa do Cigeo project set at €25bn recorded in 2016 by the Ministerial Order (3), which substitutes the 2005 estimated benchmark cost of €20.8bn on which EDF group used to rely. €0.8bn increase in provision.
- Continuing the design studies (ANDRA).
  - French Finance Act for 2021 (the Finance Act, ANDRA).
- Continued design studies (ANDRA).
  - The group of experts mandated in September 2018 concluded in September 2019 on the a priority feasibility of the various bulimus management options but stresses the importance of continuing the studies undertaken to identify the most appropriate option.
- ANDRA planning request for the creation of CIGEO in 2020, industrial pilot phase by 2030, reception of the first waste packages maintained for 2031.

2021 FACTS & FIGURES

FINANCE PROVISIONS

(1) Please refer to the release from the French Ministry for Ecology, Sustainable Development and Energy from 15 January 2016
(2) Lower provision for counterparty of underlying assets
(3) GCR: Gas-cooled reactor
(4) At the economic conditions of 2011
(5) Safety Operations Record » Dossier sur les Opérations de Sûreté »
## Discount Rate of Nuclear Provisions in France (1/5)

The real discount rate, calculated according to the calculation methods applied since end-2020, is 2.0% on 31 December 2021 given the market data at this date, with an inflation assumption of 1.7%.

The real discount rate is 10 bps down compared to end-2020.

### Table: Discount Rate of Nuclear Provisions

<table>
<thead>
<tr>
<th></th>
<th>December 2020</th>
<th>December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory ceiling rate</td>
<td>2.7% (1)</td>
<td>2.8%</td>
</tr>
<tr>
<td>Nominal discount rate</td>
<td>3.3%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Real discount rate</td>
<td>2.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.2%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

(1) 2.66% rounded to 2.7%
— The **discount rate** for nuclear provisions in France must respect a **regulatory ceiling** calculated using a formula determined by ministerial order in accordance with the French Environmental Code (Art. D594-4)

— A **new regulatory ceiling**, applying from second-half 2020, has been determined by the ministerial order of 1 July 2020 (Art. 3)

— The **formula for the current regulatory ceiling** is expressed as a real value (including inflation) and equal, after a four-year transition period starting from end-2020, to the representative value of expectations of the real long-term interest rate (selected for the calculation published by the European Insurance and Occupational Pensions Authority (EIOPA) of the ultimate forward rate (UFR)) applicable on the date in question and increased by 150 basis points

— The application of the formula at 31/12/2021 gives a **regulatory ceiling for the discount rate of 2.8% in real value**
The discount rate of nuclear provisions in France (3/5)

EVOLUTION IN DISCOUNT RATE CALCULATION METHODS

— The discount rate is now established on the basis of an interest-rate curve. This curve includes:
  - a sovereign yield rate, based on market data at the end of trading for liquid time frames (0 to 20-year OAT rate curve) and subsequently converging, by using an interpolation curve, towards the ultimate forward rate (UFR) (1);
  - to which is added a spread curve for A to BBB-rated corporate bonds.

On the basis of the disbursement cash flows expected for nuclear engagements, an equivalent single discount rate is deducted from the rate curve thus constructed.

— The inflation rate assumption is established on the basis of an inflation rate curve, built using inflation-linked market products and taking account of economic forecasts, and consistent in the long term with the inflation rate assumption underlying the UFR (2%).

— This discount rate calculation method led, at 31 December 2021, to a nominal discount rate of 3.7% combined to an inflation rate of 1.7% (respectively 3.3% and 1.2% at 31/12/2020), so real rate 10 down to 2.0%

— The 10bp decrease compared with end-2020 had no impact on net debt (excluding the tax effect) as no indebtedness was related to a provision requirement thanks to a coverage ratio of over 100% (cash effect will be favourable for around €244m)

— The impact of this decrease on adjusted economic debt (AED), excluding the tax effect, corresponds to the increase in provisions, or €1,112m (or a net effect on the AED of €868m including the tax effect)

(1) The UFR was determined by the EIOPA for extremely long-term insurance liabilities comprising disbursements beyond market time frames. It is selected in the calculation methodology consistent with the decision of the administrative authority, which, in its order of 1 July 2020 amending the order of 21 March 2007 on the securing of financing for nuclear expenses, changed the formula for the regulatory ceiling of the discount rate, henceforth taking the UFR as a reference rather than the arithmetic average of the last 48 months of the TEC 30, the reference to the UFR being considered as more relevant for nuclear provisions given the extremely long-term maturities.
— All other things being equal, depending on discount rate and inflation rate assumptions, the sensitivity (1) to a 0.1% decrease in the real discount rate (excluding the corresponding tax effect) would be:

  • For balance sheet provisions: €1,073m (2) (of which €963m for provisions covered by dedicated assets)
  • For income before tax: €(611)m

— This increase in nuclear provisions, and in particular those to be covered by dedicated assets, does not imply a direct transposition of this effect to the Group's net debt on the dates under consideration, as the amount to be allocated to dedicated assets in respect of each financial year varies, notably according to (given the order of 1 July 2020):

  • the profitability of the dedicated assets and the resulting coverage rate (3)
  • of the period within which the allocation is made, with regulation allowing ministers to determine a maximum period of five years for making the allocation

---

(1) As published in the consolidated financial statements at 31 December 2021
(2) Including €462M recorded against assets
(3) No need to allocate once the coverage rate reaches 100%
## Discount Rate of Nuclear Provisions in France: Sensitivity Analysis of the Discount Rate Based on Provisions at 31/12/2021 (5/5)

### For a variation of 10 base points

<table>
<thead>
<tr>
<th>Back-end nuclear</th>
<th>Provisions (discounted value)</th>
<th>On balance sheet provisions</th>
<th>On pre-tax earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of nuclear fuel</td>
<td>11,819</td>
<td>(120)</td>
<td>124</td>
</tr>
<tr>
<td>Long-term management of radioactive waste</td>
<td>14,233</td>
<td>(472)</td>
<td>504</td>
</tr>
<tr>
<td>Dismantling and last cores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For decommissioning permanently shut-down nuclear plants</td>
<td>12,680</td>
<td>(291)</td>
<td>299</td>
</tr>
<tr>
<td>For decommissioning nuclear plants in operation</td>
<td>5,050</td>
<td>(88)</td>
<td>91</td>
</tr>
<tr>
<td>Last cores</td>
<td>2,660</td>
<td>(54)</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>46,442</td>
<td>(1,025)</td>
<td>1,073</td>
</tr>
<tr>
<td>o/w part of the coverage base for dedicated assets</td>
<td>34,276</td>
<td>(917)</td>
<td>963</td>
</tr>
</tbody>
</table>

### Sensitivity to the discount rate

For a variation of 10 base points:
- Provisions (discounted value): +0.10%  -0.10%
- On balance sheet provisions: +0.10%  -0.10%
- On pre-tax earnings: +0.10%  -0.10%

(1) Reclassified as long-term radioactive waste management at 31/12/2020 to ensure consistency with the latest nomenclature (breaking down nuclear charges into defined operations) as annexed to the amended decree of 21 March 2007 on securing the financing of nuclear expenses.
PROVISIONS RELATED TO NUCLEAR GENERATION IN FRANCE 
PART TO BE COVERED BY DEDICATED ASSETS

In billions of euros

<table>
<thead>
<tr>
<th>Description</th>
<th>In billions of euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last core front-end part</td>
<td>2.1</td>
</tr>
<tr>
<td>Last core back-end part</td>
<td>0.6</td>
</tr>
<tr>
<td>Decommissioning permanently shut-down nuclear plants</td>
<td>12.7</td>
</tr>
<tr>
<td>Decommissioning nuclear plants in operation</td>
<td>14.2</td>
</tr>
<tr>
<td>Long-term management of radioactive waste</td>
<td>1.7</td>
</tr>
<tr>
<td>Management of nuclear fuel (Non recyclable in existing installations part)</td>
<td>10.1 (2)</td>
</tr>
<tr>
<td>Management of nuclear fuel (1)(Recyclable in existing installations part)</td>
<td>1.7</td>
</tr>
<tr>
<td>Total provisions related to nuclear generation in France</td>
<td>46.4</td>
</tr>
<tr>
<td>Long-term provisions related to nuclear generation in France to be covered by DA</td>
<td>34.3</td>
</tr>
</tbody>
</table>

(1) Related to the operating cycle
(2) Of which €1.1bn Management of nuclear fuel, excluding law
At 31 December 2020, the regulatory degree of coverage is 103.6%.

At 31 December 2021, the regulatory degree of coverage is 109.3%.

No allocation to DAs to be made in 2022 in respect of 2021 owing to a coverage rate of over 100%, in accordance with the regulation applicable since 1 July 2020.
YIELD ASSETS: +17.1%

Yield assets comprise property and infrastructure assets. In 2021, they generated a performance of 17.1%, composed of dividends received and the change in the realisable value of investments during the year. This solid performance resulted from effective sector and geographical diversification.

GROWTH ASSETS: +22.6%

As a result of the equity market rise, the growth-asset component gained 22.6%, driven primarily by investments in developed countries. Volatility was contained through diversification.

FIXED-INCOME ASSETS: -0.7%

Fixed-income assets posted a -0.7% performance in 2021 despite the rise in interest rates, mainly because rates on government loans remained at exceptionally low levels. In addition, the strong performance of credit markets, the selection and reduced sensitivity of the portfolio served to limit the decline in value. Some components, including subordinated bank bonds and the High-Yield credit, turned in a largely positive performance.

A new strategic allocation was defined in 2018 to improve the adequacy of the profile of dedicated assets to the long-term nature of the disbursements to be covered (Growth assets: 40%, Fixed-income assets: 30%, Yield assets: 30%). The targets of the new allocation will be met progressively, as investments are made, entailing a gradual rebalancing from fixed-income assets to yield assets.
EDF Invest is the unlisted investment arm of EDF’s Dedicated Assets; this portfolio amounts to €8.6bn at 31 December 2021.

The contribution of unlisted assets is the key to improve the Dedicated Assets return / risk profile and the perspective of long-term management is consistent with the liabilities to be covered.

Among Dedicated Assets, unlisted assets contribute to yield assets, growth assets and fixed-income assets, invested in underlying Infrastructure, Real Estate and other Funds portfolios.

EDF Invest aims at raising the amount of the non-listed assets portfolio up to the reference target fixed in the Strategic allocation defined in June 2018.

In 2021, EDF Invest:
- diversified its telecoms portfolio in France in fibre optic
- supplemented its investment in the UK in smart meters
- made further real estate investments in France and Germany

The contribution of unlisted assets is the key to improve the Dedicated Assets return / risk profile and the perspective of long-term management is consistent with the liabilities to be covered.

Among Dedicated Assets, unlisted assets contribute to yield assets, growth assets, and fixed-income assets, invested in underlying Infrastructure, Real Estate and other Funds portfolios.

In billions of euros:

- **€8.6bn**
- **0.7** Funds (growth and fixed-income assets)
- **1.3** Real Estate (yield)
- **6.6 (1)** Infrastructures (yield)
FINANCE

➢ HISTORIC DATA P. 193
➢ 2021 RESULTS P. 199
➢ FOCUS ON CREDIT P. 212
➢ PROVISIONS & DEDICATED ASSETS P. 221
➢ CSPE P. 237
The 2015 amended French finance act and the 2016 French finance act introduced the principles of a new mechanism for compensating energy public service costs, effective as of 1 January 2016, with the following specific characteristics:

- The State's budgeting of public service charges for energy (electricity and gas) is defined for 2022 on the basis of the CRE's (Commission for Energy Regulation) decision of 15 July 2021 and will be fully financed from 1 January 2021 by the "Energy Public Service" programme of the General Budget. The 2022 Initial Budget Act thus budgets the costs of the Public Service at €8,449m. A negative gap of €415m exists between the 2022 Initial Finance Act and the CRE deliberation of July 2021 on the "renewable energies support" item. It results from the readjustment made by the Budget Department consistent with the increase in market prices of electricity in September 2021.

- Repayment achieved at the end of 2020 of EDF’s historical compensation deficit, in accordance with the Ministers' letter of 26 January 2016, enacted in the Decree of 18 February 2016 and the Orders of 13 May and 2 December 2016.

- The TICFE (ex-CSPE, French contribution to electricity public service) tax has remained stable at €22.5/MWh since 2016 (full rate) and remained unchanged until 31/12/2021. As of 1st January 2022, the TDCFE (Departmental Tax) is abolished, which is accompanied simultaneously by an increase in the full rate of the TICFE with a departmental part. The TICFE thus stands at €25.83/MWh since 1 January 2022 for the full rate.
PUBLIC SERVICE COSTS (2/3) : CHARGES FOR EDF

Article L121-6 of the French Energy Code stipulates that the charges attributable to the public service tasks assigned to the electricity operators are fully compensated by the State.

<table>
<thead>
<tr>
<th>In millions of euros</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase obligation</td>
<td>5,699</td>
<td>6,158</td>
<td>3,342</td>
</tr>
<tr>
<td></td>
<td>74%</td>
<td>76%</td>
<td>61%</td>
</tr>
<tr>
<td>Other (2)</td>
<td>1,963</td>
<td>1,923</td>
<td>2,130</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>24%</td>
<td>39%</td>
</tr>
<tr>
<td>Total EDF CSPE</td>
<td>7,662</td>
<td>8,081</td>
<td>5,472</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The trend in public service charges between 2020 and 2021 can be attributed to two opposing factors:

➢ Charges on the purchasing requirement in metropolitan France fell €2,816m between 2020 and 2021 owing to a -5.8TWh contraction in renewable energies volumes (mainly wind (-5.9TWh) and hydro (-0.2TWh)), despite the development of new renewables energies power installed in 2021. Production under the purchasing requirement totalled 56.9TWh in 2021. The decline in volumes was accompanied by a sharp increase in electricity spot prices of €77/MWh between 2020 (€32/MWh) and 2021 (€109/MWh). As with the volume effect, this increase reduced charges by tightening the spread between the purchase obligation price and the market valuation.

➢ ZNI (3) charges rose by €197m between 2020 and 2021 as a result of the increase in charges for additional electricity production costs to offset the shutdown of certain third-party producer plants and respond to the increase in electricity consumption, with the easing of the effects of the health crisis in 2021 compared with 2020.

(1) Purchases obligations include electricity generated from: hydropower (less than 12MW), biomass, wind power, PV power, cogeneration, recovery of household waste and energy recovery, with the exception of ZNI (3)

(2) Additional generation costs and purchase obligations in ZNI (3), the TPN (First Necessity Tariff) and the FSL (Housing Solidarity Fund), as well as charges relating to the sales shortfall of the Gas portfolio following the price freeze ruled on by the government starting on 1 November 2021.

(3) ZNI: Zones non interconnectées corresponding to overseas departments and Corsica and some of the Breton islands.
PUBLIC SERVICE COSTS (3/3): CHANGE IN PURCHASE OBLIGATIONS IN MAINLAND FRANCE FOR EDF

Principle: The compensation mechanism of public energy services charges offsets the difference between the cost of purchase obligations in mainland France and market prices.

(1) EDF SA excluding island activities
(2) The compensation mechanism of public energy services charges also covers the tariff equalization costs in the ZNI (Zones Non Interconnectées), and the solidarity programs.
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<td>MARKET DATA</td>
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<td>APPENDICES</td>
</tr>
</tbody>
</table>
MARKETS: ELECTRICITY CONSUMPTION
(DATA NOT ADJUSTED FOR WEATHER AND CALENDAR)

In TWh

France

Source: RTE

The United Kingdom

Source: BEIS

Italy

Source: Terna
The increase in prices set new records in 2021:
- A substantial increase in the price of gas, coal and CO₂, leading to a significant rise in the production costs of fossil-fired power plants
- Low wind-power generation in Germany and France, favouring the use of thermal power plants (coal)
- Higher demand in 2021 stemming from the economic recovery after the lockdowns in Europe in 2020

The coupling of markets has enabled a certain degree of price convergence, though still limited by available interconnection capacities at borders.

Average observed spot market price for 2021:
- EPEXSPOT: France & Germany
- N2EX: United-Kingdom
- OMIE: Spain
- GME: Italy (Prezzo Unico Nazionale)
- APX: Netherlands
- BELPEX: Belgium

(1) Change vs average 2020 prices
(2) Trade (Source: RTE & ENTSO-E Transparency Website) and change vs 2020
(3) Introduction of flow-based coupling mechanism from 21 May 2015 for the entire CWE (France, Benelux, Germany)
France’s export balance for 2021 stood at 44.3TWh. Despite a rise in consumption, the high level of power generation kept this balance at the same level as last year. Exports were up by 7.9TWh to 86.5TWh. They were higher across all borders except in the CWE \(^{(1)}\) zone, where they were down by 4.3TWh. Imports stood at 42.2TWh, up by 0.8TWh, with increases across all borders except from Italy (-0.03TWh) and Switzerland (-0.3TWh) where they registered a slight decrease.

Source: RTE until August 2020 and from September 2020: ENTSO-E data

\(^{(1)}\) CWE flow-based coupling zone composed of Germany, Belgium, France, Luxembourg and Netherlands, set up in May 2015
## FRENCH POWER TRADE BALANCES AT ITS BORDERS

### MARKET DATA

<table>
<thead>
<tr>
<th>Country</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>United Kingdom</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>imports</td>
<td>0.6</td>
<td>1.4</td>
</tr>
<tr>
<td>balance</td>
<td>3.1</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>imports</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>balance</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>5.9</td>
<td>2.1</td>
</tr>
<tr>
<td>imports</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>balance</td>
<td>5.8</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>6.4</td>
<td>4.7</td>
</tr>
<tr>
<td>imports</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>balance</td>
<td>5.6</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>CWE (2)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>4.3</td>
<td>6.7</td>
</tr>
<tr>
<td>imports</td>
<td>4.7</td>
<td>2.3</td>
</tr>
<tr>
<td>balance</td>
<td>-0.3</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>exports</td>
<td>24.3</td>
<td>21.2</td>
</tr>
<tr>
<td>imports</td>
<td>7.1</td>
<td>6.0</td>
</tr>
<tr>
<td>balance</td>
<td>17.2</td>
<td>15.3</td>
</tr>
</tbody>
</table>

Source: RTE

(1) Rounded to the nearest tenth

(2) CWE flow-based coupling zone composed of Germany, Belgium, France, Luxembourg and Netherlands, set up in May 2015
In France, baseload electricity spot prices averaged €109.2/MWh in 2021, up €77.0/MWh compared with 2020. The sizeable increase resulted from a combination of three factors: a sharp rise in commodities prices in Q3 and Q4 2021, triggering a substantial increase in the cost of producing electricity from fossil fuel-fired power plants; a recovery in consumption (+21.6TWh vs. 2020) especially in Q2 and Q4 2021; and a decline in renewables generation in 2021 compared with 2020 (-3.8%, or -1.9TWh). Greater use was made of fossil-fired generation resources in Q4 2021, particularly coal, the production of which increased 204% relative to Q4 2020.
Peakload electricity spot prices averaged €127.4/MWh in 2021 (+€88.4/MWh vs. 2020). As with baseload prices, the substantial increase resulted from the rise in demand combined with the sharp increase in commodities prices (gas, coal and CO₂) and the greater use of fossil-fuel resources in 2021.
FRANCE/GERMANY SPREAD FROM 01/01/2020 TO 31/12/2021

(Daily spread in €/MWh)

Note: Over the period, the France/Germany spread reached its minimum on 6 August 2021 at €-52.80/MWh, and its maximum on 19 December 2021 at €223.49/MWh
FORWARD ELECTRICITY PRICES IN FRANCE, THE UK, ITALY AND GERMANY (Y+1) FROM 01/01/2020 TO 31/12/2021

Electricity - Annual Baseload contract France (EEX)
Electricity - Annual Baseload contract UK (EDF Trading)
Electricity - Annual Baseload contract Italy (EDF Trading)
FORWARD ELECTRICITY PRICES IN FRANCE, THE UK, ITALY AND GERMANY (Y+2) FROM 01/01/2020 TO 31/12/2021
Coal prices for next-year delivery in Europe rose by +63.2% compared to 2020. In China, imports and higher production were not enough to cope with the increase in demand. Then gas prices soared and coal-fired power plants became competitive in a long term perspective. In Europe, waves of cold weather drove countries to rebuild their coal stocks. Finally, some coal-producing countries (Colombia, Russia, South Africa, Australia, Indonesia) had production problems due to social contests and unfavourable weather conditions.
Oil prices were up by +64.0% compared to 2020 as demand rose significantly all over the world, driven by the resumption of normal economic activity and introduction of recovery plans in the USA and Europe. The rise in oil prices was limited by the OPEP+ countries’ adjustment of production to the IEA’s forecast worldwide demand.
The annual gas contract price for next-year delivery in the PEG zone increased by +131.8%. Lower temperatures in the spring brought gas stocks down in Europe. In Asia, more extreme temperatures led to high gas consumption for heating and air conditioning. China imported more gas in a politically tense situation that drove it to halt imports of Australian coal. Uncertainties over gas supplies from Russia via Ukraine, or via NordStream 2, stoked tensions on the European market, and competition between European and Asian markets to attract LNG cargo ships also contributed to upward price trends. Finally, gas prices shot up in the early winter in response to announcements by the Russian president and geopolitical tensions in eastern Europe.
The price of emissions certificates for delivery in December Y+1 stood at an average €54.0/t in 2021 (+115.0% or +€28.9/t vs 2020). The CO₂ quota price followed a robust upward trend throughout the year 2021.

CO₂ emission quota prices began the year in a favourable political environment, after the announcement in January that the USA would rejoin the Paris Agreement. Then on 14 July the European Union presented its proposals to cut EU greenhouse gas emissions by 55% by 2030, rather than the initial 40% target. Late in the year, the German government’s proposal to set a minimum carbon price reinforced the upward price trend.

As well as these developments, temperatures were lower than normal in April and greater use of fossil-fired power plants was necessary. From the third quarter onwards, gas prices soared among fears over the levels of European stocks, and this pushed up the output by coal-fired power plant.

Finally, prices fluctuated with “financial” speculative position-taking, which also contributed to higher volatility in CO₂ quotas.

Because the price of electricity is based on the marginal cost of production, it is sensitive to changes in the price of CO₂ that influence the cost of production of electricity using gas and coal. The sensitivity of the wholesale electricity price in France to the CO₂ price is around €0.5/MWh to €0.6/MWh for €1/tonne of CO₂.
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FINANCIAL CALENDAR

- 4 May 2022: Q1 2022 sales
- 12 May 2022: General Shareholder’s meeting
- 28 July 2022: 2022 half-year results
A TEAM DEDICATED TO ANALYSTS AND INVESTORS

To understand better the EDF group, you can also visit our web page dedicated to investors and analysts: https://www.edf.fr/en/the-edf-group/dedicated-sections/investors-shareholders

…on which you can download our Kit Investisseur including:

➢ **The Analyst Pack**, with all the main financial and extra-financial data in an Excel format

➢ **The Universal Registration Document**

➢ All the data relative to our **annual results**

For more information, our team is available to you at this address: EDF-IRTeam@edf.fr
GLOSSARY (1/6)

➢ **IAEA**: International Atomic Energy Agency based in Vienna (Austria).

➢ **ANDRA**: National Agency for radioactive waste. In France, radioactive waste is managed by the National Agency for Radioactive Waste Management (ANDRA), a public industrial and commercial institution created under the French law of 30 December 1991.

➢ **APE**: the French State Shareholding Agency is a national department controlled by the Minister of Economy and Finance. Its mission is to act as a shareholder for the French Government in order to develop its assets to maximise the value of its stakes.

➢ **Architect-Assembler**: for EDF, the architect-assembler has control over the design and operation of its power plants; the organization of development projects; the schedule for completion and costs of construction; relations with the Nuclear Safety Authority; and the integration of feedback from operational experience. EDF’s role as architect-assembler ensures control over its industrial policy with respect to the design, construction and operation of its fleet of power plants.

➢ **ARENH**: Regulated Access to Historical Nuclear Energy.

➢ **ASN (Autorité de Sûreté Nucléaire)**: the French Nuclear Safety Authority controls nuclear safety and radioprotection in France, on behalf of the French government, 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 ASN is an independent administrative authority with a staff of more than 300. It is represented at the national level by the General Agency for Nuclear Safety and Radioprotection (or “DGSNR”).

➢ **Biomass**: technologies based on biomass mainly consists of burning certain types of waste, particularly from the timber and farming industries, or exploiting wood fuel forests, to produce heat or electricity.

➢ **Cogeneration**: generation technique for combined electricity and heat generation. The advantage of cogeneration is the ability to capture the heat produced by the fuel, whereas in traditional 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 Turbine (CCGT)**: The most recent technology for generating electricity in a natural gas-fired plant. A combined cycle is made up of one or more 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 (effluents). The heat from the exhaust gases is recovered by a boiler, thus producing steam. Part of the steam is then recovered by the steam turbine to generate electricity.
CRE (Commission de Régulation de l’Énergie): French energy regulatory Commission. Set up on 30 March 2000, the CRE is an independent administrative authority responsible for contributing to the proper functioning of the electricity and natural gas markets in the interests of final consumers. In the respect, the CRE ensures, in particular, that the conditions for access to electricity and natural gas transmission and distribution networks do not impede the development of competition. The CRE has significant powers: the power to make proposals, advisory powers and decision-making powers. In particular, the CRE proposes regulated tariffs for the sale of electricity. The CRE has decision-making power to set the Tariffs for Using the Public Transmission and Distribution Networks (TURPE). The CRE is also vested with very broad powers that enable it to investigate and obtain any information that it may deem useful for the fulfilment of its remit, as well as authority to settle disputes and to apply penalties.

Distribution networks: downstream of the transmission network, medium- and low-tension distribution networks that serve end-users (individuals, Groups, SMEs, SMIs, etc.)

Electricity supply: can be broken down into four types of consumption: “basic” (or “ribbon”) supply of electricity generated and consumed throughout the year; “semi-basic” electricity supply, which is generated and consumed over the winter period; “peak” electricity supply, which corresponds to periods of the year when electricity generation or consumption is significant; and “lace” supply which is a complement to the “ribbon” supply.

EPR (European Pressurized Reactor): latest generation of reactors currently under construction (known as generation 3), it is the result of Franco-German cooperation, and offers advanced safety, environmental and technical performance.

ETS: Emission Trading System

European Green taxonomy: Commission delegated regulated (EU) 2021/2139 of 4 June 2021 supplementing regulation (EU) 2020/852 of the European Parliament and of the Council with the technical review criteria for determining under which conditions an economic activity can be considered to contribute substantially to climate change mitigation or adaptation and whether that economic activity does not cause significant harm to any of the other environmental objectives.

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: 1) upstream: the processing of concentrates from uranium ore, the conversion, enrichment and production of fuel (which takes more than two years); 2) 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); 3) downstream: pool storage, reprocessing of spent fuel in reactors of recoverable material, vitrification of highly radioactive waste, then temporary storage of the waste before storage.
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Greenhouse gases: Gas that retains a portion of the solar radiation in the atmosphere and for which an increase in emissions due to human activity (man-made emissions) causes an increase in the earth’s average temperature and plays an important role in climate change. The Kyoto Protocol covers the seven following principal greenhouse gases: carbon dioxide (CO$_2$), methane (CH$_4$), nitrogen protoxide (N$_2$O), hydrofluorocarbons (HFC), perfluorated hydrocarbons (PFC), sulfurhexafluoride (SF$_6$) and, since 2013, nitrogen trifluoride (NF$_3$).

Hydrogen: The conversion of natural gas into hydrogen generates CO$_2$ hence the qualification of “grey” hydrogen. This form of hydrogen is used on a large scale, particularly in the chemical industry to produce ammonia and fertilisers. So-called “blue” hydrogen is obtained when the emitted CO$_2$ is captured and then reused or stored. So-called “green” hydrogen is generated from renewable energy sources. The electricity generated by wind turbines or solar panels is transformed with water through an electrolysis process. No greenhouse gases are emitted. Hydrogen can be stored in large quantities and then converted back not electricity.

Hydropower generation: maximum power energy that can be produced from hydraulic sources in normal conditions. However, generation from hydroelectric facilities does vary, sometimes markedly, from one year to the next depending on hydraulicity (rainfall and snowfall). In dry year, the generation index may vary by 20% or more from the standard level.

INB: basic nuclear facilities.

Interconnection: electricity transmission infrastructure that allows for exchanges of energy between different countries, by connecting the transmission network of one country to that of a neighboring country.

IRSN: Institut de radioprotection et de sûreté nucléaire. IRSN is the public expert in research and assessment of nuclear and radiological risks.

LDC: Local Distribution Companies that provide for distribution of gas and electricity to the end-customers on a delimited geographical area.

LNG (Liquefied Natural Gas): natural gas turned into liquid form by reducing its temperature to −162°C allowing for a reduction by 600 in its volume.

MEDEF: French companies association (“Mouvement des entreprises de France”).
➢ **Metering**: A system allowing for the recording, at a given network connection point, of the volumes of electricity transmitted or distributed (power, frequency, active and reactive energy)

➢ **Microgrid**: Microgrids are small power grids designed to provide a reliable supply of electricity to a small number of consumers. They combine multiple local and diffuse production facilities, consumption facilities, storage facilities and tools for supervision and demand management. They can be connected directly to a distribution network or operate disconnected from the network (islanding)

➢ **MW – MWh**: The megawatt-hour (MWh) is the energy unit generated by a facility and is equal to the facilities’ power, expressed in megawatts (MW), multiplied by the duration of operations in hours. $1\text{MW} = 1,000\text{ kilowatts} = 1\text{ million watts} \quad 1\text{MWh} = 1\text{MW produced for 1 hour} = 1$ megawatt-hour $1\text{GW} = 1,000\text{MW} = 1\text{ billion watts} \quad 1\text{TW} = 1,000\text{GW}$

➢ **Non-interconnected zones**: Zones in France which are not connected (by power lines) to metropolitan France (Corsica and overseas departments)

➢ **Nuclear safety**: 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)

➢ **Nuclear tranche**: Electrical generation unit consisting of a nuclear boiler and a turbo-alternator generator. A nuclear tranche essentially consists of its reactor type and the power of its turbo-alternator generator. EDF nuclear plants include two or four tranches, and occasionally six

➢ **Ofgem**: Ofgem is the Office of the Gas and Electricity Markets in the UK. Its main missions consist of protecting consumers, regulating gas and electricity monopoly companies, helping to secure Britain’s energy supplies by promoting and regulating competitive gas and electricity markets. It also contributes to the drive to curb climate change and promote sustainable development

➢ **Plant availability**: Fraction of power available, out of theoretical maximum energy, counting only technical non-availability. The availability coefficient ($K_d$) is defined as the ratio between annual actual generation capacity (or amount producible annually) and maximum theoretical generation capacity, where maximum theoretical generation capacity $=$ installed capacity $\times 8,760\text{h}$. The $K_d$, which includes only technical non-availability, i.e. scheduled shutdowns, unplanned outages and testing periods, characterizes a plant’s industrial performance

➢ **PPA**: Price Purchase Agreement
➢ **PWR:** in a Pressurized Water Reactor, the primary coolant (water) is pumped under high pressure to the reactor core where it is heated by the energy generated by the fission of atoms. The heated water then flows to a steam generator where it transfers its thermal energy to a secondary system where steam is generated and flows to turbines which, in turn, spin an electric generator. In contrast to a boiling water reactor (BWR), pressure in the primary coolant loop prevents the water from boiling within the reactor

➢ **Radioprotection:** At a power plant, ionising radiation sources are numerous: the fuel itself, equipment activated by neutron flux (particularly that which is close to the core, such as tanks or lids) and particles from corrosion of the primary circuit 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 “collectivedosimetry” and expressed in man-sieverts, is used as an indicator of dose received by all participating persons. The mobilisation of ground players has allowed a continuous improvement of performance on the protection of employees against the effects of ionising radiation.

➢ **Renewable energies:** energies for which generation does not require extinction of the initial resource. They largely derive from geothermal, water, air, fire and solar sources. They include hydro, wind, solar (the energy produced by marine waves and currents), geothermal (energy derived from the heat of the earth’s magma) energies, and bio-mass (energy derived from living matter, particularly wood and organic waste). They often include energy from the incineration of household or industrial waste

➢ **Reprocessing:** reactor burnt fuel reprocessing aimed at separating materials that can be recycled (uranium and plutonium) from final waste

➢ **RTE:** RTE is the operator of the French electricity transmission system. RTE, a public service company, operates, maintains and develops the high and very high voltage network

➢ **Scope 1, 2 and 3:** Every year, EDF draws up a GHG report (scopes 1, 2 and 3) covering the Group scope calculated according to the principles of GHG Protocol Corporate Standard. Scope 1 covers the direct emissions generated by EDF’s assets: CO₂, CH₄ and N₂O emissions from power and heat generation plants, consumption of fossil fuels for heating, fuel consumption of the fleet of vehicles and machinery, fugitive emissions from hydropower plant reservoirs, fugitive emissions of SF₆ and refrigerating agents. Scope 2 covers indirect emissions linked to the purchase of energy for our own needs: electricity consumption of tertiary buildings and data centres, consumption of heating and chilled water networks for our own use. Scope 3, which comprises 15 categories (GHG Protocol), covers other indirect emissions generated by our suppliers (purchases of goods and services, upstream of fuels including nuclear, leased assets, downstream freight of by-products), and by our customers (upstream and combustion of gas purchased for resale to end customers, production of electricity and heat purchased for resale to end customers) or at our facilities (depreciation of emissions linked to manufacture of fixed assets, emissions from non-consolidated investments, upstream and losses linked to the transport and distribution of electricity, upstream and losses of electricity, heat and cold consumption for own use, waste management, travels of employees, etc.)
➢ **Series:** In the nuclear field, a series of plants means a set of nuclear plants with identical generation capacity. EDF’s PWR model is divided into three series of available electrical power: the 900-MW series (34 tranches of approximately 900MW each), the 1,300-MW series (20 tranches) and the 1,450-MW series (4 tranches).

➢ **STEP:** Pumped-storage hydropower plant. Power plant with two tanks, an upper and a lower one, connected by pumps that allow the water to be pumped up once turbined and located in the lower tank, towards the upper tank.

➢ **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 risks control.

➢ **Storage center:** Low or medium-level short-life radioactive waste from nuclear plants, 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 1,000,000cm, and an acceptance capacity of approximately 60 years. Very low-level short-life radioactive waste is sent to ANDRA’s Morvilliers storage center (also in the Aube region). This center was commissioned in October 2003 and has an operating life of about 30 years.

➢ **Transmission networks:** Networks providing for the transmission of electrical power at high and very high voltages from the generating sites to the distribution networks or industrial sites directly connected to it; this includes the major interconnection transmission network (400,000 volts and 225,000 volts) and the regional distribution networks (225,000 volts, 150,000 volts, 90,000 volts and 63,000 volts).

➢ **Uranium:** 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.

➢ **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 pressurised water reactor fuel.

➢ **Waste:** Nowadays, the nuclear generation of 1MWh of electricity (equivalent to the monthly consumption of two households) produces around 11g of total waste across all categories. Short-life waste represents more than 90% of the total waste, but contains only 0.1% of the total radioactivity of those 11g.