

# ANNUAL RESULTS 2011

Appendices

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# Table of appendices

■ Accounts	4
■ Financing and Cash Management	54
■ Strategy & investments	61
■ Renewable energies	81
■ Post-Fukushima (ECS)	86
■ France – output	99
■ France – French regulation	115
■ France – Supply	123
■ Markets	135

# 2011 Annual Results



Accounts appendices

## Main changes in scope 2011 vs. 2010

### Disposal of UK networks

- Income statement: 10-month contribution in 2010
- Balance sheet: debt cut by €6.7bn in 2010

### Change in consolidation method for RTE

- Income statement:
  - 12-month contribution in 2010
  - 2011 RTE's contribution recognised under "Share of net income of affiliated companies" resulting from the recognition as an associate undertaking, effective 31 December 2010
- Balance sheet: deconsolidation of RTE debt, effective 31 December 2010

# Definition of comparable scope

## 2010 restated<sup>(1)</sup>

## 2010 adjusted<sup>(2)</sup>

EBITDA

**UK:** 10 months (networks)<sup>(3)</sup>  
**RTE:** 12 months  
**EnBW:** nil

**UK :** nil  
**RTE :** nil  
**EnBW :** nil

Net income  
 excluding  
 non-recurring  
 items

**UK:** 10 months (networks)<sup>(3)</sup>  
**RTE:** 12 months  
**EnBW:** net income of discontinued  
 activities

**UK :** nil  
**RTE :** 12 months  
**EnBW :** nil

Capex

**UK :** 10 months (networks)<sup>(3)</sup>  
**RTE :** 12 months  
**EnBW :** nil

**UK :** nil  
**RTE :** nil  
**EnBW :** nil

(1) Change in presentation of optimization activities EDF Luminus (ex SPE)

(2) Results at comparable scope: excluding RTE, EnBW, Eggborough and UK networks

(3) Eggborough : 3 months

## 2010 Key figures at 2011 scope

*In millions of euros*

	2010 published	Luminus impact <sup>(1)</sup>	RTE	EnBW disposal	UK disposals	2010 adjusted
<b>Sales</b>	65,165	155	(211)	-	(1,187)	63,922
<b>EBITDA</b>	16,623	-	(1,525)	-	(942)	14,156
<b>EBIT</b>	6,240	-	(886)	-	(636)	4,718
<b>EDF Net income</b>	1,020	-	-	(360)	(251)	409
<b>Net income excluding non-recurring items</b>	3,961	-	-	(475) <sup>(2)</sup>	(381) <sup>(2)</sup>	3,105

*In millions of euros*

	2010 published	EDF Luminus impact <sup>(1)</sup>	RTE	EnBW disposal	UK disposals	2010 adjusted
<b>Capex</b>	12,053	-	(1,161)	-	(798)	10,094

(1) Change in the presentation of EDF Luminus optimization activities

(2) Based on the assumption of a 1% pre-tax return on the net proceeds on disposal

# Sales by activity

*In millions of euros*

	TOTAL GROUP	France	UK	Italy	Other international	Other activities
<b>2010 sales (published)</b>	<b>65,165</b>	<b>36,167</b>	<b>10,683</b>	<b>5,647</b>	<b>6,878</b>	<b>5,790</b>
EDF Luminus optimisation	155	-	-	-	155	-
<b>2010 sales (restated)</b>	<b>65,320</b>	<b>36,167</b>	<b>10,683</b>	<b>5,647</b>	<b>7,033</b>	<b>5,790</b>
RTE	(211)	(216)	-	-	-	5
UK disposals (networks, Eggborough)	(1,187)	-	(1,187)	-	-	-
<b>2010 sales (adjusted)</b>	<b>63,922</b>	<b>35,951</b>	<b>9,496</b>	<b>5,647</b>	<b>7,033</b>	<b>5,795</b>
Currencies	(302)	-	(166)	(3)	(107)	(26)
Scope	(37)	13	-	(81)	(53)	84
Organic growth	1,724	1,207	(762)	989	628	(338)
<b>2011 sales</b>	<b>65,307</b>	<b>37,171</b>	<b>8,568</b>	<b>6,552</b>	<b>7,501</b>	<b>5,515</b>

# EBITDA by activity

*In millions of euros*

	<b>TOTAL GROUP</b>	<b>France</b>	<b>UK</b>	<b>Italy</b>	<b>Other international</b>	<b>Other activities</b>
<b>2010 EBITDA (published)</b>	<b>16,623</b>	<b>10,124</b>	<b>2,732</b>	<b>801</b>	<b>1,084</b>	<b>1,882</b>
RTE	(1,525)	(1,525)				
UK disposals (networks, Eggborough)	(942)		(942)			
<b>2010 EBITDA (adjusted)</b>	<b>14,156</b>	<b>8,599</b>	<b>1,790</b>	<b>801</b>	<b>1,084</b>	<b>1,882</b>
Currencies	(73)		(31)	(1)	(30)	(11)
Scope	(23)	(28)		(6)	15	(4)
Organic growth	764	540	153	(202)	211	62
<b>2011 EBITDA</b>	<b>14,824</b>	<b>9,111</b>	<b>1,912</b>	<b>592</b>	<b>1,280</b>	<b>1,929</b>

# Simplified adjusted 2010 income statement

*In millions of euros*

	2010 published	EDF Luminus	2010 restated	RTE	UK disposals	EnBW disposal	2010 adjusted
<b>Sales</b>	<b>65,165</b>	<b>155</b>	<b>65,320</b>	<b>(211)</b>	<b>(1,187)</b>	-	<b>63,922</b>
Fuel and energy purchases	(26,021)	(155)	(26,176)	(2,961)	(241)	-	(29,378)
Other external expenses	(10,582)	-	(10,582)	503	189	-	(9,890)
Personnel expenses	(11,422)	-	(11,422)	711	293	-	(10,418)
Taxes other than income taxes	(3,227)	-	(3,227)	415	62	-	(2,750)
Other operating income and expenses	2,710	-	2,710	18	(58)	-	2,670
<b>EBITDA</b>	<b>16,623</b>	-	<b>16,623</b>	<b>(1,525)</b>	<b>(942)</b>	-	<b>14,156</b>
Net changes in fair value on energy & commodity derivatives, excluding trading activities	15	-	15	-	-	-	15
Net depreciation and amortization & increases in provisions for renewal	(7,854)	-	(7,854)	639	353	-	(6,862)
(Impairment) / reversals	(2,544)	-	(2,544)	-	(47)	-	(2,591)
<b>EBIT</b>	<b>6,240</b>	-	<b>6,240</b>	<b>(886)</b>	<b>(636)</b>	-	<b>4,718</b>
<b>Financial result</b>	<b>(4,426)</b>	-	<b>(4,426)</b>	<b>328</b>	<b>163</b>	<b>39</b>	<b>(3,896)</b>
<b>Income before taxes of consolidated companies</b>	<b>1,814</b>	-	<b>1,814</b>	<b>(558)</b>	<b>(473)</b>	<b>39</b>	<b>822</b>
<b>EDF Net income</b>	<b>1,020</b>	-	<b>1,020</b>	-	<b>(251)</b>	<b>(360)</b>	<b>409</b>
<b>Net income*</b>	<b>3,961</b>	-	<b>3,961</b>	-	<b>(381)</b>	<b>(475)</b>	<b>3,105</b>

# 2010 adjusted free cash flow

*In millions of euros*

	2010 adjusted	Change	2010 adjusted
<b>EBITDA</b>	<b>16,623</b>	<b>(2,467)</b>	<b>14,156</b>
Neutralisation of non-cash items included in EBITDA	(1,165)	(21)	(1,186)
Net financial expenses disbursed	(2,197)	449	(1,748)
Income tax paid	(1,967)	153	(1,814)
Other items	152	339	491
<b>Operating cash flow</b>	<b>11,446</b>	<b>(1,547)</b>	<b>9,899</b>
Change in net WCR	298	(273)	25
Gross Capex	(12,241)	1,967	(10,274)
Disposal of fixed assets	188	(8)	180
<b>Free cash Flow</b>	<b>(309)</b>	<b>139</b>	<b>(170)</b>

# Simplified income statement

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>
<b>Sales</b>	<b>63,922</b>	<b>65,307</b>
Fuel and energy purchases	(29,378)	(30,195)
Other external expenses	(9,890)	(9,931)
Personnel expenses	(10,418)	(10,917)
Taxes other than income taxes	(2,750)	(3,101)
Other operating income and expenses and extension of TaRTAM (Law of June 7, 2010)	2,670	3,661
<b>EBITDA</b>	<b>14,156</b>	<b>14,824</b>
Net changes in fair value on energy & commodity derivatives, excluding trading activities	15	(116)
Net depreciation and amortization & increases in provisions for renewal	(6,862)	(6,506)
(Impairment) / reversals	(2,591)	84
<b>EBIT</b>	<b>4,718</b>	<b>8,286</b>
<b>Financial result</b>	<b>(3,896)</b>	<b>(3,780)</b>
<b>Income before taxes of consolidated companies</b>	<b>822</b>	<b>4,506</b>
<b>EDF Net income</b>	<b>409</b>	<b>3,010</b>
<b>Current net income <sup>(1)</sup></b>	<b>3,105</b>	<b>3,520</b>

# Change in net income

*In millions of euros*

	2010 adjusted	<b>2011</b>	$\Delta$ %
<b>Income before taxes of consolidated companies</b>	<b>822</b>	<b>4,506</b>	x5
Income taxes	(682)	(1,305)	+91.3%
Share in income of associates	504	45	(91.1%)
Net income attributable to non-controlling interests	(235)	(236)	0.4%
<b>EDF net income</b>	<b>409</b>	<b>3,010</b>	x7
Neutralization of non-recurring items	2,696	510	(81.1%)
<b>Current net income <sup>(1)</sup></b>	<b>3,105</b>	<b>3,520</b>	13.4%

# France / outside France change

In millions of euros

	France			Outside France			TOTAL		
	2010 adjusted	2011	Δ%	2010 adjusted	2011	Δ%	2010 adjusted	2011	Δ%
Sales	35,951	37,171	3.4%	27,971	28,136	0.6%	63,922	65,307	2.2%
EBITDA	8,599	9,111	6.0%	5,557	5,713	2.8%	14,156	14,824	4.7%
EBIT	4,488	5,376	19.8%	230	2,910	n/a	4,718	8,286	75.6%

## 2011 Results breakdown

	France	Outside France
Sales	56.9%	43.1%
EBITDA	61.5%	38.5%
EBIT	64.9%	35.1%

# From sales to operating income by segment in 2011

<i>In millions of euros</i>	<b>TOTAL GROUP</b>	France	UK	Italy	Other International	Other activities
<b>Sales</b>	<b>65,307</b>	<b>37,171</b>	<b>8,568</b>	<b>6,552</b>	<b>7,501</b>	<b>5,515</b>
Fuel and energy purchases	(30,195)	(14,087)	(4,810)	(5,306)	(5,075)	(917)
Other external expenses	(9,931)	(6,040)	(1,046)	(455)	(633)	(1,757)
Personnel expenses	(10,917)	(8,147)	(1,039)	(217)	(478)	(1,036)
Taxes other than income taxes	(3,101)	(2,834)	(54)	(11)	(92)	(110)
Other operating income and expenses	3,661	3,048	293	29	57	234
<b>EBITDA</b>	<b>14,824</b>	<b>9,111</b>	<b>1,912</b>	<b>592</b>	<b>1,280</b>	<b>1,929</b>
IAS 39 volatility	(116)	(29)	50	(1)	(64)	(72)
Net depreciation and amortisation & increases in provisions for renewal	(6,506)	(4,119)	(966)	(427)	(528)	(466)
(Impairment) / reversals	84	413	-	(320)	258	(267)
<b>EBIT</b>	<b>8,286</b>	<b>5,376</b>	<b>996</b>	<b>(156)</b>	<b>946</b>	<b>1,124</b>

# 2011 organic changes

*In millions of euros*

	<b>TOTAL</b>	France	UK	Italy	Other International	Other activities
<b>Sales</b>	<b>1,724</b>	<b>1,207</b>	<b>(762)</b>	<b>989</b>	<b>628</b>	<b>(338)</b>
In %	<b>2.7%</b>	<b>3.4%</b>	<b>(8%)</b>	<b>17.5%</b>	<b>8.9%</b>	<b>(5.8%)</b>
Fuel and energy purchases	(1,095)	(720)	1,151	(1,047)	(613)	134
In %	3.7%	5.4%	(19.0%)	24.1%	13.4%	(12.9%)
Other external expenses	18	(163)	22	(27)	48	138
In %	(0.2%)	2.8%	(2.0%)	6.3%	(7.3%)	(7.5%)
Personnel expenses	(530)	(428)	(45)	(3)	(27)	(27)
In %	5.1%	5.6%	4.4%	1.4%	5.3%	2.7%
Taxes other than income taxes	(356)	(298)	(41)	(2)	(2)	(13)
In %	12.9%	11.8%	315.4%	22.2%	2.0%	13.5%
Other operating income and expenses	1,003	942	(172)	(112)	177	168
In %	37.6%	44.8%	(36.3%)	(78.3%)	(148.7%)	247.1%
<b>EBITDA</b>	<b>764</b>	<b>540</b>	<b>153</b>	<b>(202)</b>	<b>211</b>	<b>62</b>
In %	<b>5.4%</b>	<b>6.3%</b>	<b>8.5%</b>	<b>(25.2%)</b>	<b>19.5%</b>	<b>3.3%</b>

# From sales to adjusted operating income by activity in 2010

<i>In millions of euros</i>	<b>TOTAL</b>	France	UK	Italy	Other International	Other activities
<b>Sales</b>	<b>63,922</b>	<b>35,951</b>	<b>9,496</b>	<b>5,647</b>	<b>7,033</b>	<b>5,795</b>
Fuel and energy purchases	(29,378)	(13,368)	(6,068)	(4,340)	(4,560)	(1,042)
Other external expenses	(9,890)	(5,865)	(1,087)	(428)	(660)	(1,850)
Personnel expenses	(10,418)	(7,690)	(1,012)	(212)	(511)	(993)
Taxes other than income taxes	(2,750)	(2,533)	(13)	(9)	(99)	(96)
Other operating income and expenses <sup>(1)</sup>	2,670	2,104	474	143	(119)	68
<b>EBITDA</b>	<b>14,156</b>	<b>8,599</b>	<b>1,790</b>	<b>801</b>	<b>1,084</b>	<b>1,882</b>
IAS 39 volatility	15	37	(68)	-	157	(111)
Net depreciation and amortisation & increases in provisions for renewal	(6,862)	(4,148)	(1,160)	(471)	(578)	(505)
(Impairment) / reversals	(2,591)	-	(399)	(942)	(1,056)	(194)
<b>EBIT</b>	<b>4,718</b>	<b>4,488</b>	<b>163</b>	<b>(612)</b>	<b>(393)</b>	<b>1,072</b>

(1) Including TaRTAM extension (07/06/2010 and 07/12/2010 Laws)

# Change in EBITDA

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>	<b>Δ%</b>	<b>Δ% org.</b>
<b>France</b>	8,599	9,111	6.0%	6.3%
United Kingdom	1,790	1,912	6.8%	8.5%
Italy	801	592	(26.1%)	(25.2%)
Other International	1,084	1,280	18.1%	19.5%
Other activities	1,882	1,929	2.5%	3.3%
<b>Group</b>	<b>14,156</b>	<b>14,824</b>	<b>4.7%</b>	<b>5.4%</b>

Growth in France underpinned by rise in nuclear output  
 Good performances in the UK and other International segments  
 Shrinking margins at Edison

# Increase of Group OPEX

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>	$\Delta$	$\Delta\%$ org.
<b>France</b>	(13,555)	(14,187)	(591)	4.4%
United Kingdom	(2,099)	(2,085)	(23)	1.1%
Italy	(640)	(672)	(30)	4.7%
Other International	(1,171)	(1,111)	21	(1.8%)
Other activities	(2,843)	(2,793)	111	(3.9%)
<b>Group</b>	<b>(20,308)</b>	<b>(20,848)</b>	<b>(512)</b>	<b>2.5%</b>

## 2012 Opex: up vs 2011 mainly in France

### Measure postponing retirement age

#### Unregulated France

- Nuclear:
  - Preparing mid-life overhaul of careenage
  - Renewal and strengthening of competencies
  - Start of FARN deployment
- Hydropower:
  - Deployment of the Renouveau programme
  - Preparing the renewal of hydropower concessions: end-of-concession and preparing bids

#### French Regulation

- Growth of business (including development of new services and less favourable weather assumptions than in 2011)
- Anticipating staff renewal

2011 Opex up 2.5% vs 2010, thanks to the impact of STG programme

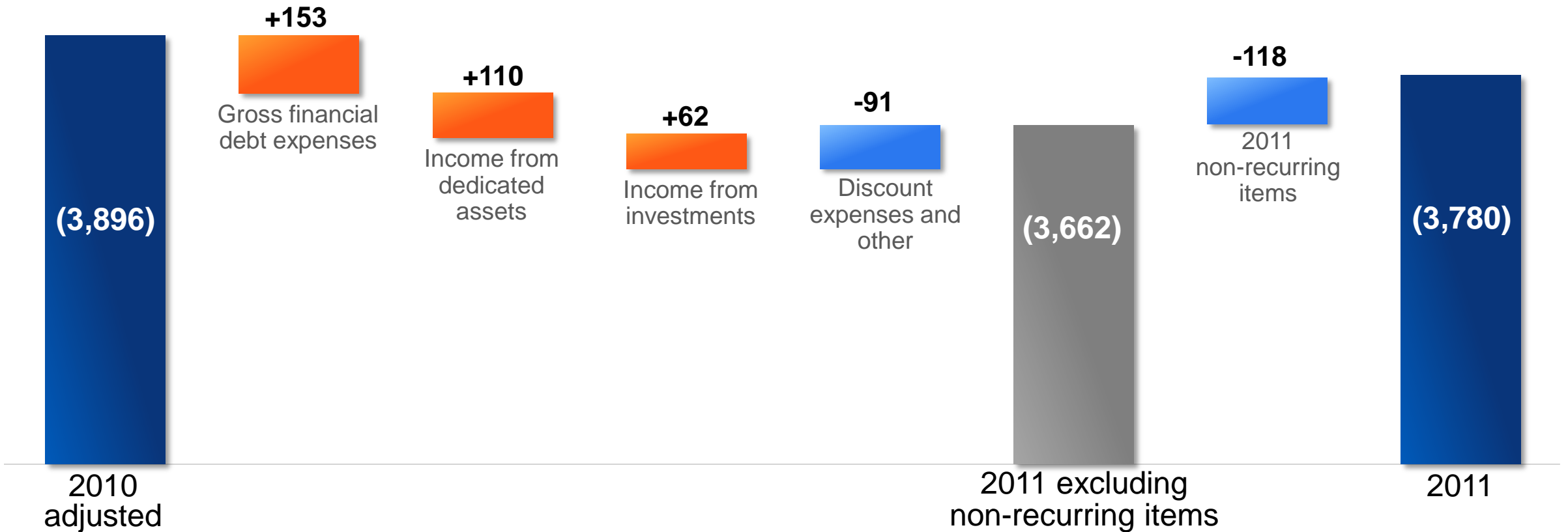
# IAS 39 volatility: breakdown by geographical area

*In millions of euros*

	2010 adjusted	2011	Δ
<b>France</b>	<b>37</b>	<b>(29)</b>	<b>(66)</b>
United Kingdom	(68)	50	118
Italy	-	(1)	(1)
Other international	157	(64)	(221)
Other activities	(111)	(72)	39
<b>Group</b>	<b>15</b>	<b>(116)</b>	<b>(131)</b>

# Improved financial result due to active management

*in million of euros*



# Analysis of change in financial income

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>
Cost of gross financial indebtedness	(2,424)	(2,271)
<i>O/w interest expenses on financing operations</i>	(2,392)	(2,284)
<i>O/w net foreign exchange gain on debt and other</i>	(32)	13
Discount expense	(2,971)	(3,064)
Other financial income and expenses	1,499	1,555
<b>Total financial result</b>	<b>(3,896)</b>	<b>(3,780)</b>

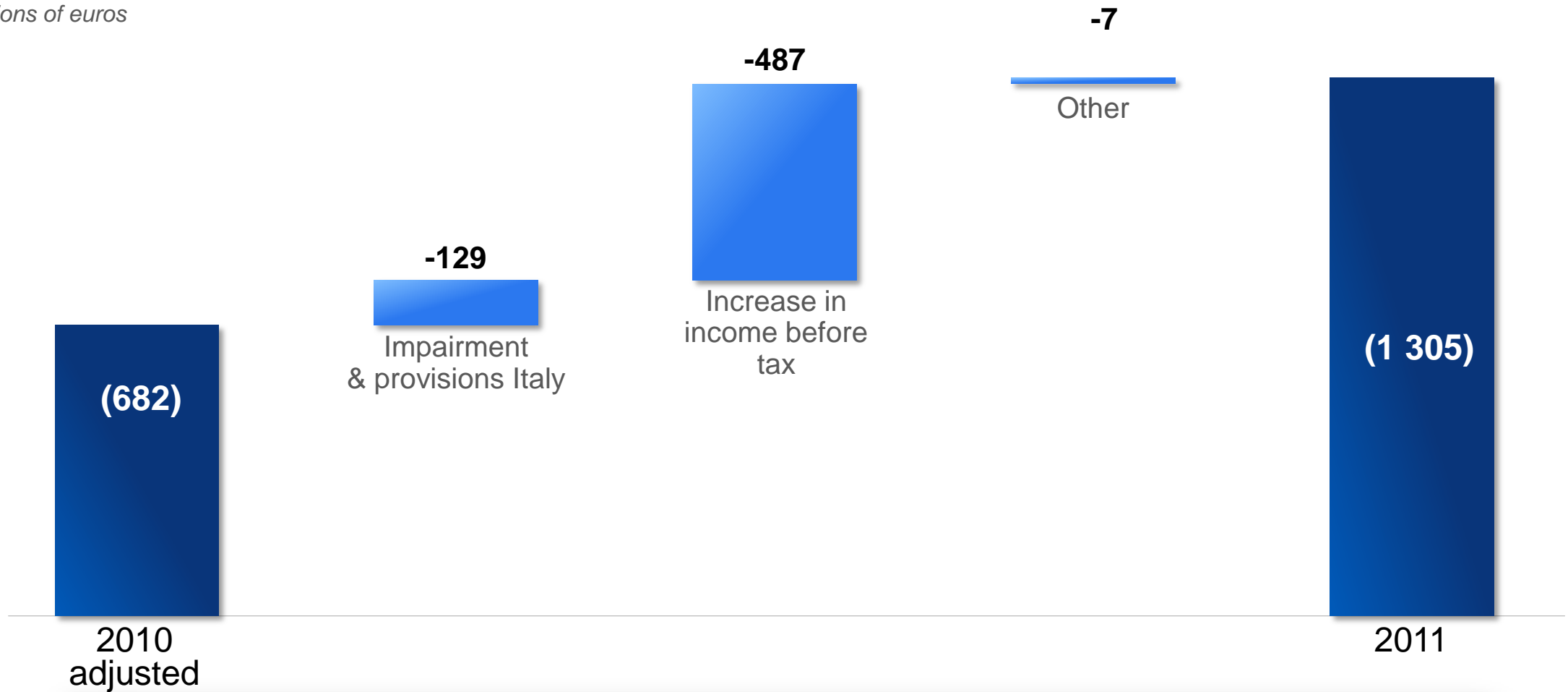
**Gross debt of €50bn with an average coupon of 4.3%**

# From interest charges on financing activities to net financial expenses disbursed

<i>In millions of euros</i>	2010	2011
<b>Interest charges on financing activities</b>	<b>(2,392)</b>	<b>(2,284)</b>
Accrued interest	157	64
Dividends received	61	66
Other financial income and charges	426	531
<b>Net financial expenses disbursed</b>	<b>(1,748)</b>	<b>(1,623)</b>

# A stable effective tax rate

in millions of euros



Effective tax rate stable excluding impact of impairment and provisions in Italy: 26.6% in 2011 vs. 26.4% in 2010

## Analysis of non-recurring items net of tax

	2010 adjusted	2011
<b>Net income</b>	<b>3,105</b>	<b>3,520</b>
<b>Total of non-recurring items net of tax</b>	<b>(2,696)</b>	<b>(510)</b>
IAS 39 volatility	(36)	(58)
Provision for risks & impairments	(2,471)	(976)
Gains on disposals	-	253
Other	(189)	271
<b>Net Income - Group share</b>	<b>409</b>	<b>3,010</b>

## Breakdown of share in income of associates

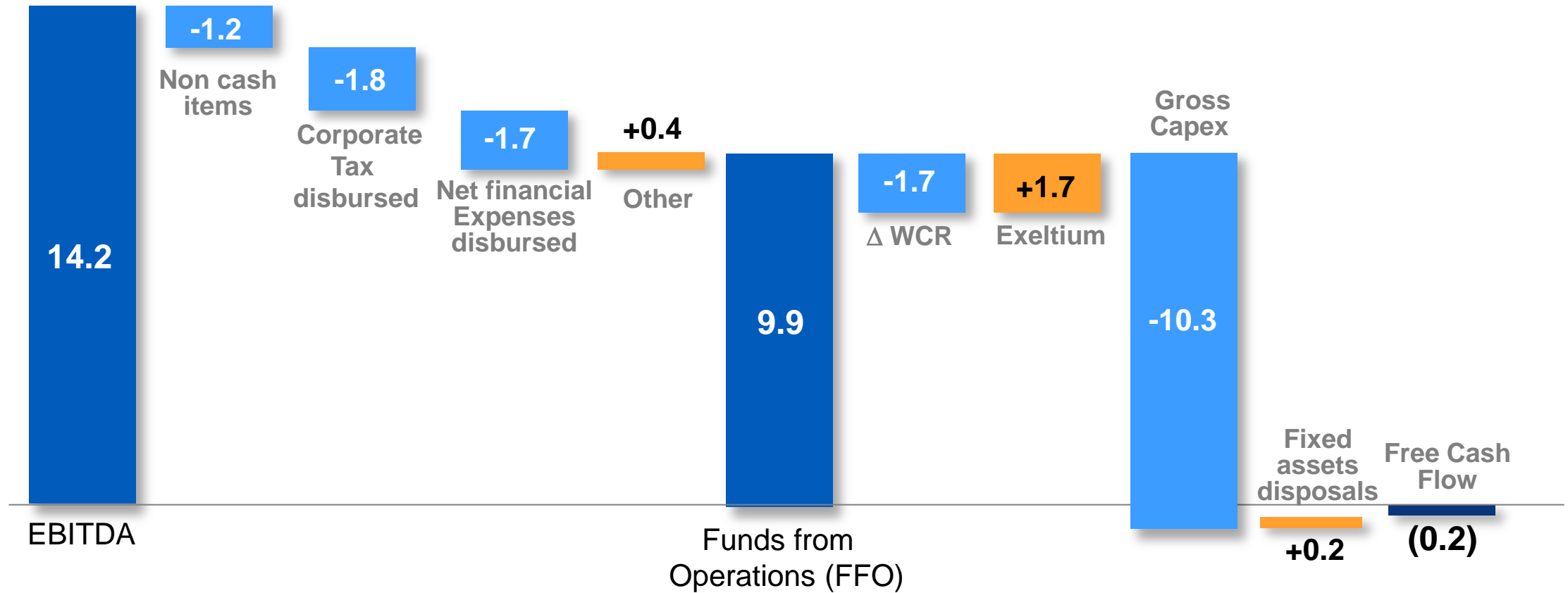
<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>	<b>Change</b>
<b>TOTAL</b>	<b>504</b>	<b>45</b>	<b>(459)</b>
RTE	370	266	(104)
ALPIQ	107	(276)	(383)
Dalkia Holding	24	23	(1)
NTPC (Laos)	29	23	(6)
Estag	2	-3	(5)
EDF Trading	7	5	(2)
Other	(35)	7	(42)

# Change in net income attributable to non-controlling interests (minority interests)

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>	<b>Change</b>
<b>TOTAL</b>	<b>235</b>	<b>236</b>	<b>1</b>
EDF Energy	35	123	88
SPE	56	19	(37)
Dalkia international	29	17	(12)
EDF Energies Nouvelles	32	17	(15)
ERSA	16	27	11
Kogeneracja	9	8	(1)
Zielona Gora	12	6	(6)
Edison	13	-4	(17)
Other	33	23	(10)

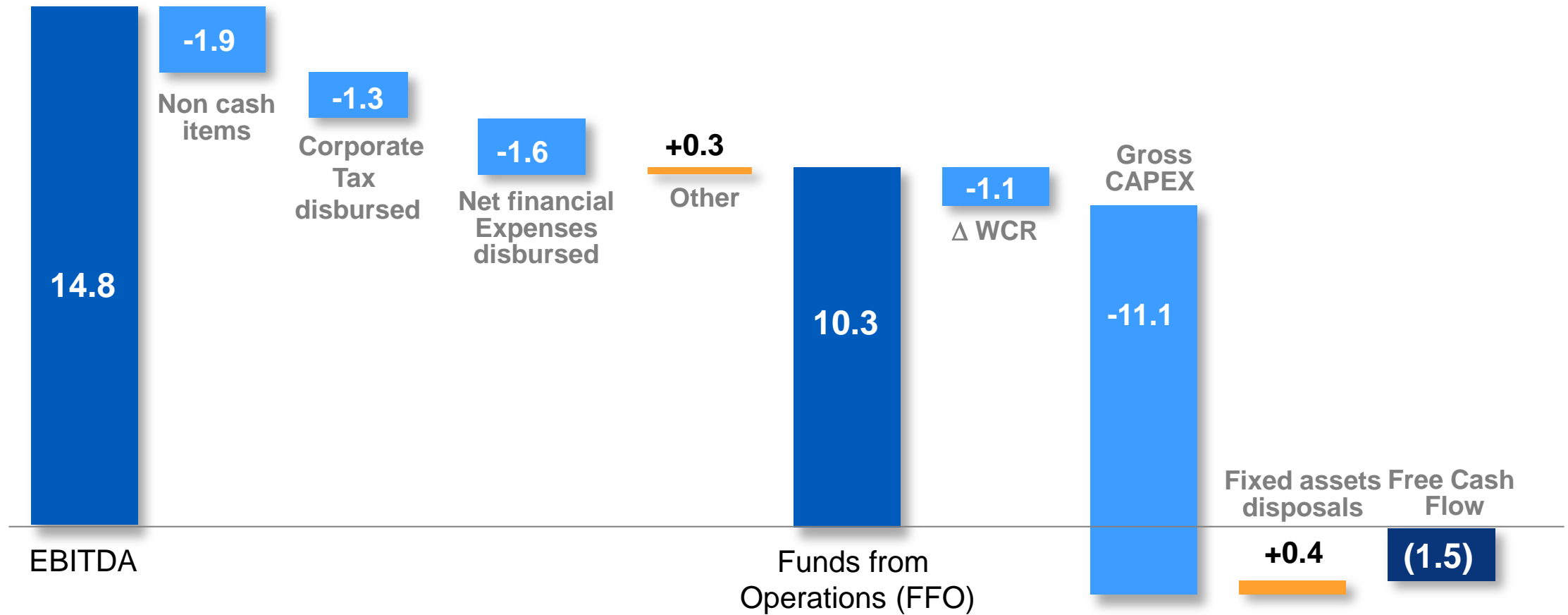
# Adjusted free cash flow - 2010

*In billions of euros*



# Free cash flow - 2011

*In billions of euros*

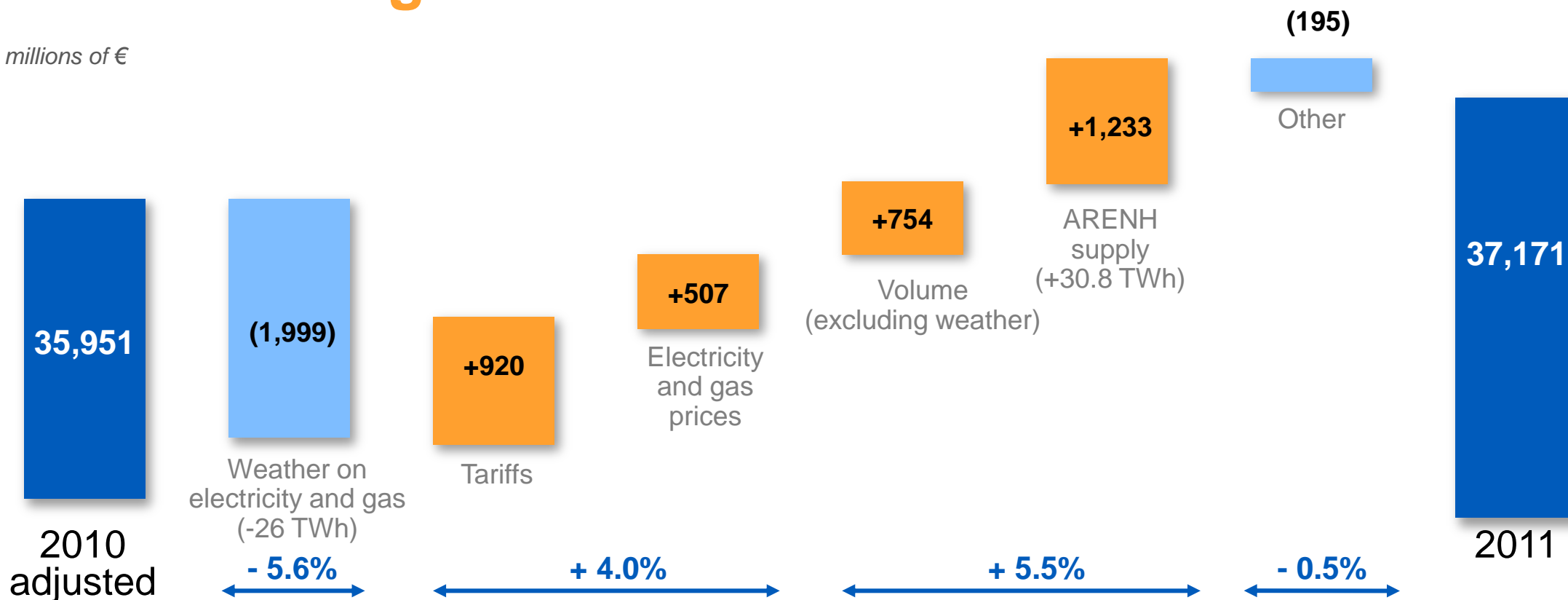


# Increase in Group sales

<i>In millions of euros</i>	<b>2010 adjusted</b>	<b>2011</b>	<b>Δ%</b>	<b>Δ% org.</b>
France	35,951	37,171	3.4%	3.4%
United Kingdom	9,496	8,568	(9.8%)	(8.0%)
Italy	5,647	6,552	16.0%	17.5%
Other International	7,033	7,501	6.7%	8.9%
Other activities	5,795	5,515	(4.8%)	(5.8%)
<b>Group</b>	<b>63,922</b>	<b>65,307</b>	<b>2.2%</b>	<b>2.7%</b>

# France: sales growth of + 3.4%

in millions of €



- Negative weather impact: -5.6%
- Increase in volumes excluding weather and tariffs on all market segments
- Positive impact of tariff and price changes: +4%

# France: change in EBITDA

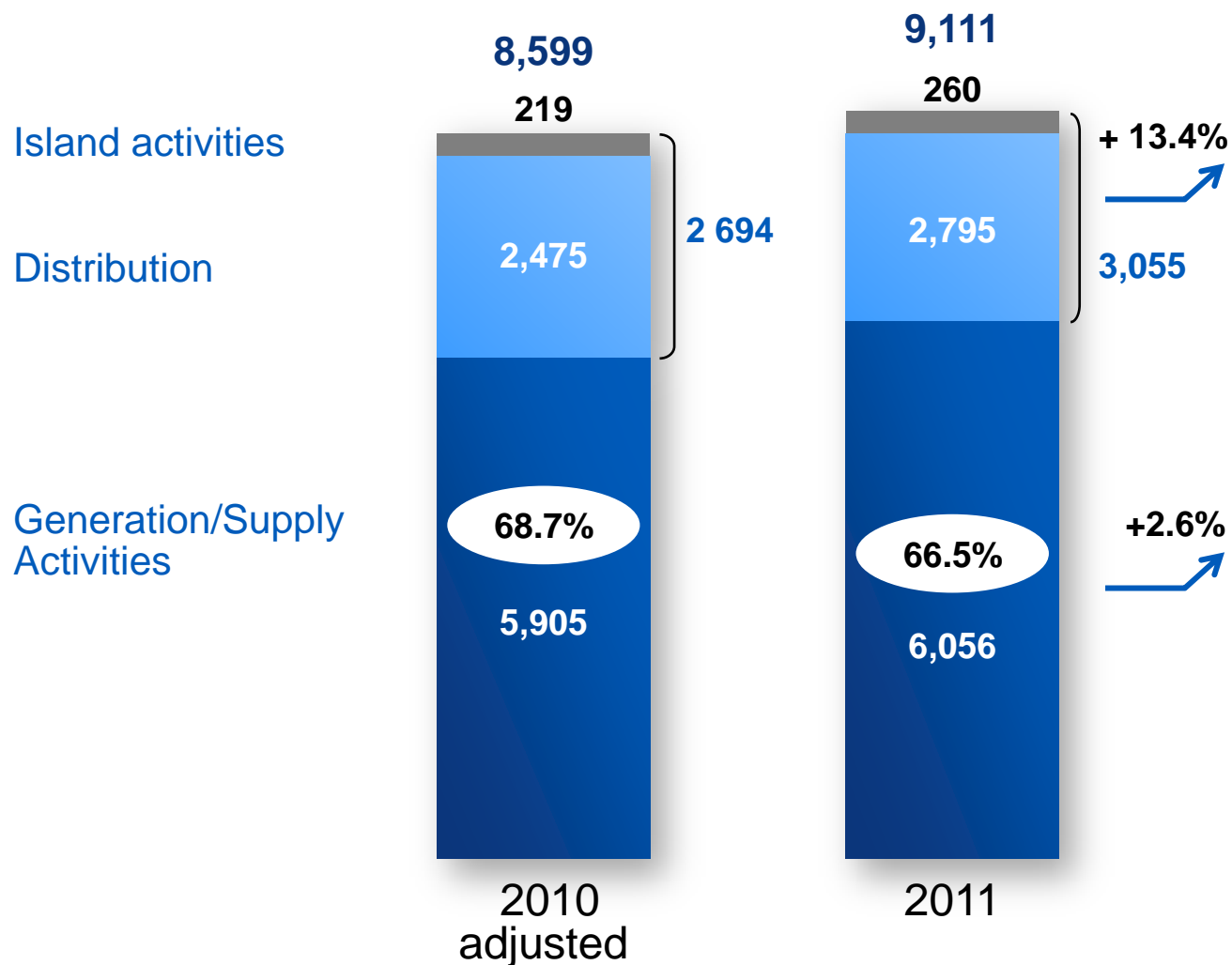
in € millions

	2010 adjusted	2011	Δ%
Unregulated	5,905	6,056	2.6%
Regulated <sup>(1)</sup>	2,694	3,055	13.4%
<b>Total France</b>	<b>8,599</b>	<b>9,111</b>	<b>6.0%</b>

- Growth of unregulated businesses:  
Strong performance of nuclear output offsetting substantial hydropower gap
- Growth of regulated businesses
  - Higher regulated tariffs offsetting delivered volume drop-off caused by warmer weather/cost control
  - Increase in Electric Island activities

# Breakdown of France 2011 EBITDA

In millions of euros



## ■ Regulated activities:

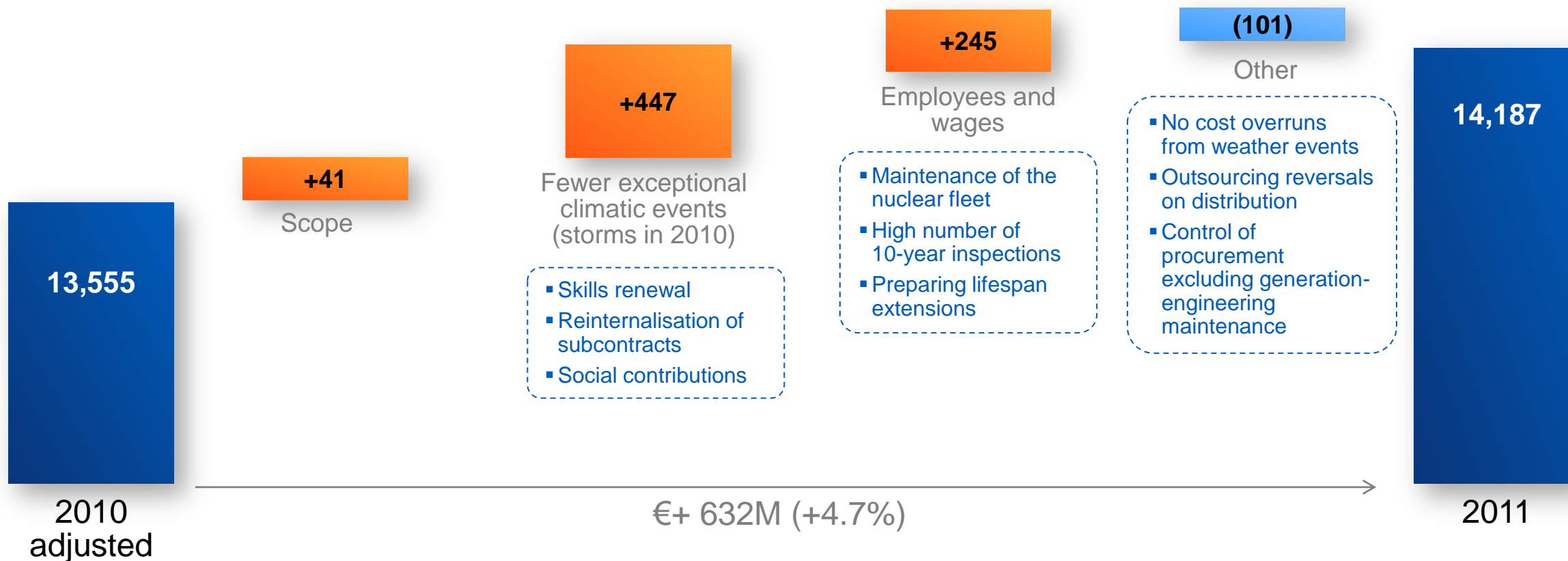
- August 2011 network rate hike (+€330m)
- Margin growth for Islands Electric Systems

## ■ Generation/Supply Activities:

- Nuclear output increase (+€587m)
- Unfavourable trends of the hydraulicity (-€582m)
- Positive impact of integrated tariff increases on July 1, 2011 net of the negative impact of network fees hikes (August 2011) (+€490m for energy component)
- Higher opex (-€632m)
- TaRTAM mechanism cost (-€170m<sup>(1)</sup>)

# Analysis of France opex change 2011 vs. 2010

In millions of €



## Fair value accounting

- The fair value adjustments arising on the acquisition of British Energy are broadly broken down into 2 key areas:
  - Fair value adjustment of fuel sourcing contract and consumption of nuclear fuel inventories
  - Provision for the mark to market of trading contracts
  
- EBITDA fair value adjustments:

	2009	2010	2011
EBITDA FV Adjustments (€m)	277	324	122

# Cash flow statement

*in millions of euros*

	2010	2011
<b>EBITDA</b> (earnings before interest, tax, depreciation and amortisation)	<b>16,623</b>	<b>14,824</b>
Cancellation of non-cash items included in EBITDA	(1,165)	(1,925)
Net financial expenses disbursed	(2,197)	(1,623)
Income taxes paid	(1,967)	(1,331)
Other	152	336
<b>Funds From Operations (FFO)</b>	<b>11,446</b>	<b>10,281</b>
Change in net Working Capital Requirements	298	(1,121)
Gross CAPEX	(12,241)	(11,134)
Net proceeds from sale of assets	188	497
<b>Free Cash Flow</b>	<b>(309)</b>	<b>(1,477)</b>
Dedicated assets	(1,343)	(315)
Other financial investments	3,613	3,277
Dividends paid in cash	(2,353)	(2,383)
Other monetary items	(287)	8
<b>Monetary change in net financial debt</b>	<b>(679)</b>	<b>(890)</b>
Effects of change in scope	9,358	2,607
Effects of currency fluctuations	(782)	(516)
Other non-monetary changes	15	(97)
<b>Change in net financial debt of continued activities</b>	<b>195</b>	<b>-</b>
<b>Change in net financial debt of discontinued activities</b>	<b>7,912</b>	<b>1,104</b>
<b>Net Financial Debt – Opening balance</b>	<b>42,496</b>	<b>34,389</b>
<b>Net Financial Debt – Closing balance</b>	<b>34,389</b>	<b>33,285</b>

# EDF Group simplified balance sheets

*In millions of euros*

	31 December 2010	31 December 2011
Fixed assets	123,844	128,318
<i>O/w Goodwill</i>	12,028	11,648
Inventories and trade receivables	32,209	34,489
Other assets	50,333	52,032
Cash and equivalents and other liquid assets <sup>(1)</sup>	16,944	16,184
Assets held for sale (excluding cash and liquid assets)	17,229	684
<b>Total Assets</b>	<b>240,559</b>	<b>231,707</b>

	31 December 2010	31 December 2011
Shareholders' equity (Group Share)	31,317	30,570
Non-controlling Interest	5,586	4,337
Specific concession liabilities	41,161	41,769
Provisions	54,475	55,528
Financial liabilities	51,333	49,469
Other liabilities	47,320	49,897
Liabilities linked to assets held for sale (excluding financial liabilities)	9,367	137
<b>Total Liabilities</b>	<b>240,559</b>	<b>231,707</b>

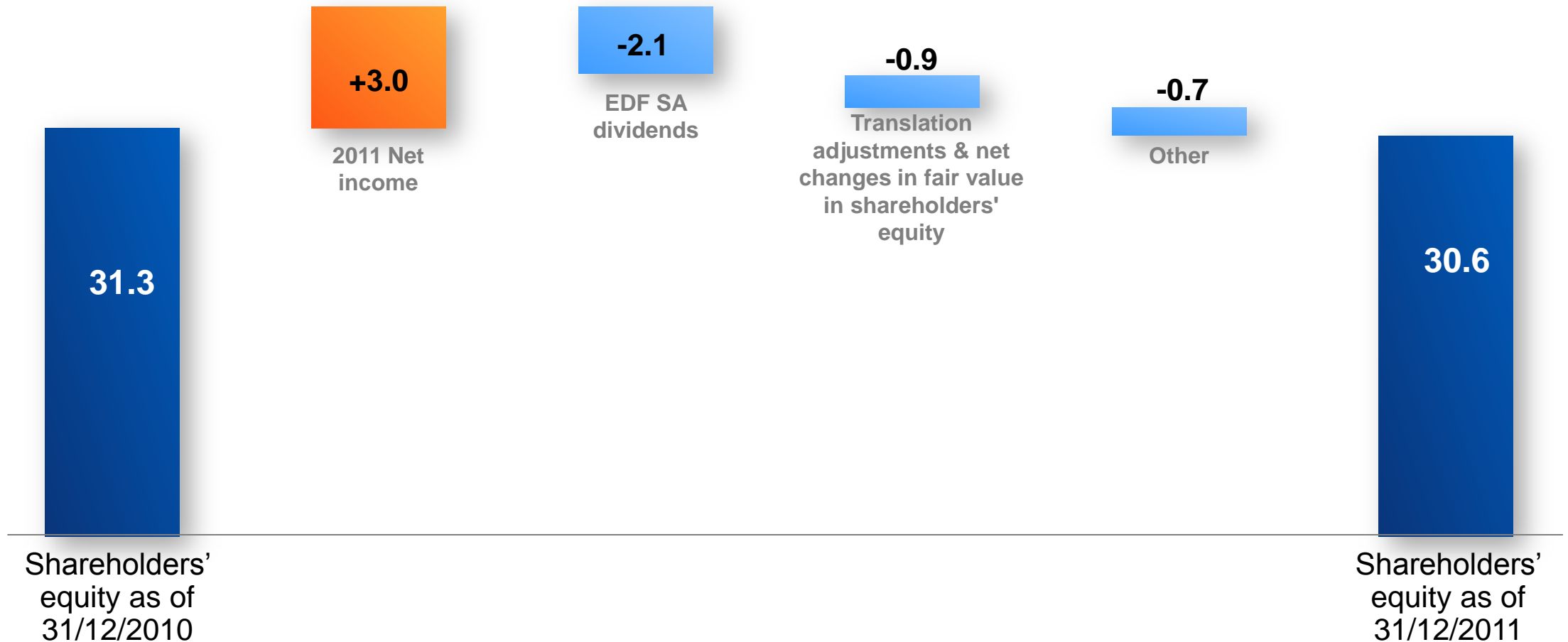
# Goodwill

*In millions of euros*

	31/12/2010	31/12/2011	Change
<b>TOTAL</b>	<b>12,028</b>	<b>11,648</b>	<b>(380)</b>
EDF Energy	7,972	8,260	288
Edison	1,910	1,400	(510)
Dalkia international	907	799	(108)
EDF Luminus	378	378	-
EDF Energies nouvelles	255	209	(46)
Electricité de Strasbourg	134	134	-
ESTAG Group	114	112	(2)
EDF Trading	112	112	-
Other	246	244	(2)

# Change in shareholders' equity <sup>(1)</sup> as of 31 December 2011

In € billion



# Statement of net income and gains and losses recorded directly in equity

*In millions of euros*

	2010	2011
<b>Group net income</b>	<b>1,249</b>	<b>3,246</b>
<b>Other Comprehensive income and conversion gaps registered in shareholders' equity</b>		
Changes in the fair value of available-for-sale financial assets	816	(740)
Changes in the fair value of available-for-sale financial assets transferred to income on sale	131	80
Changes in the fair value of hedging instruments	24	(1,637)
Changes in the fair value of hedging instruments transferred to income on sale	296	377
Translation adjustments	2,013	676
Taxes	(521)	437
<b>Total of gains and losses recorded directly in equity</b>	<b>2,759</b>	<b>(807)</b>
<b>Net income and gains and losses recorded directly in equity</b>	<b>4,008</b>	<b>2,439</b>
	<i>Of which Group share</i>	<i>3,679</i>
	<i>Of which Minority interests</i>	<i>329</i>

# Provisions

*In millions of euros*

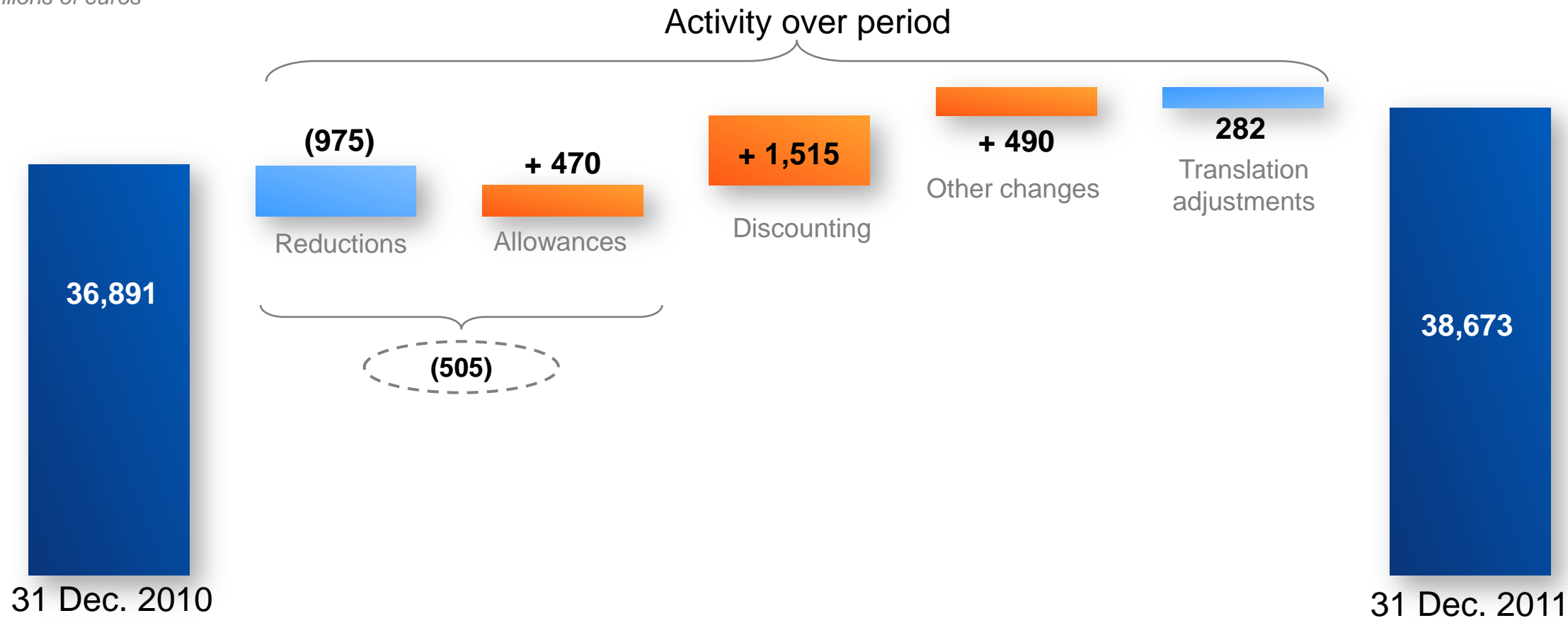
	31 December 2010		
	Current	Non Current	Total
Provisions for back-end nuclear cycle	1,020	17,000	<b>18,020</b>
Provisions for decommissioning and last cores	241	18,630	<b>18,871</b>
Provisions for decommissioning of non-nuclear power plants	60	753	<b>813</b>
Provisions for employee benefits	819	11,745	<b>12,564</b>
Other provisions for risks and charges	2,870	1,337	<b>4,207</b>
<b>Total provisions</b>	<b>5,010</b>	<b>49,465</b>	<b>54,475</b>

	31 December 2011		
	Current	Non Current	Total
	1,302	17,528	<b>18,830</b>
	173	19,670	<b>19,843</b>
	41	809	<b>850</b>
	846	12 215	<b>13 061</b>
	1,606	1,338	<b>2,944</b>
<b>Total provisions</b>	<b>3,968</b>	<b>51,560</b>	<b>55,528</b>

# Group nuclear provisions: €38.7billion

## EDF Group scope

In millions of euros



# EDF SA Nuclear provisions: €29.2 billion

*In millions of euros*

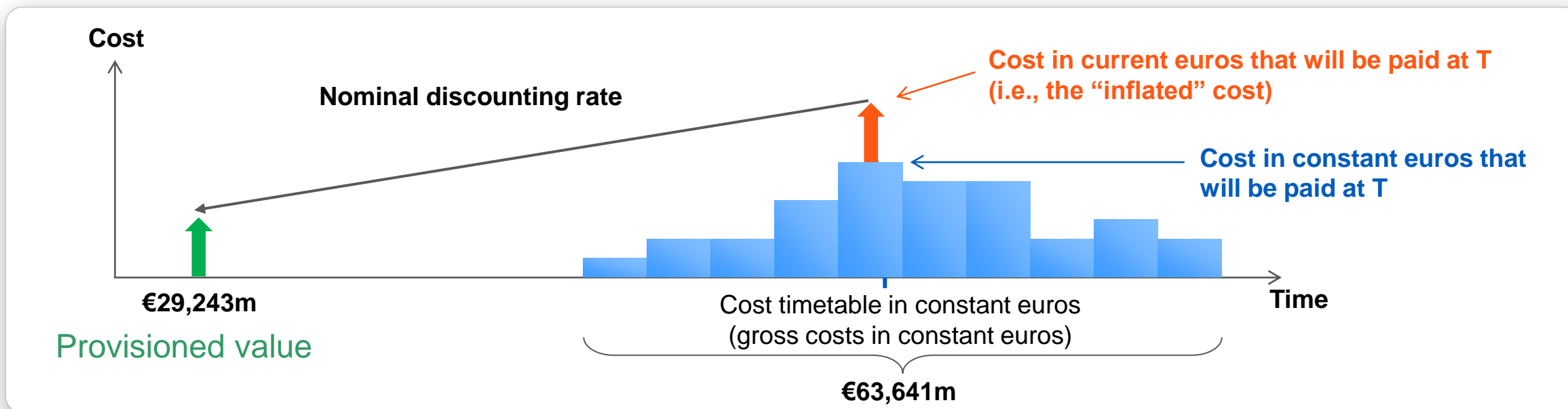
	31 Dec 2010	Reductions	Net Allow.	Disc.	Other changes	31 Dec. 2011
<b>Provisions for back-end nuclear cycle</b>						
<b>Total</b>	<b>15,360</b>	<b>(690)</b>	<b>410</b>	<b>760</b>	<b>25</b>	<b>15,865</b>
Provisions for management of spent fuel	8,852	(540)	374	438	19	9,143
Provisions for long-term management of radioactive waste	6,508	(150)	36	322	6	6,722
<b>Provisions for nuclear dismantling and last core</b>						
<b>Total</b>	<b>12,937</b>	<b>(224)</b>	<b>11</b>	<b>647</b>	<b>7</b>	<b>13,378</b>
Provisions for dismantling power stations	11,031	(224)	-	552	7	11,366
Provisions for last cores	1,906	-	11	95	-	2,012
<b>Total nuclear provisions</b>	<b>28,297</b>	<b>(914)</b>	<b>421</b>	<b>1,407</b>	<b>32</b>	<b>29,243</b>

## Discounting rate for provisions in France

- 2010 discounting rates maintained as of 31 December, 2011
- Nuclear provisions: 5%
  - The discounting rate is based on the yield of a sovereign bond (French OAT) of the same duration as the liability in question, plus the average spread of a selection of companies with the same rating as the company carrying the liability
- 23 February 2007 executive order and 21 March 2007 ministerial order pertaining to the funding of nuclear liabilities states that the discounting rate used by EDF may not exceed a ceiling “*that is equal to the arithmetic average over the past 48 months of the 30-year constant maturity rate (TEC 30), on the closing date of the financial year under review, plus 1 point*”

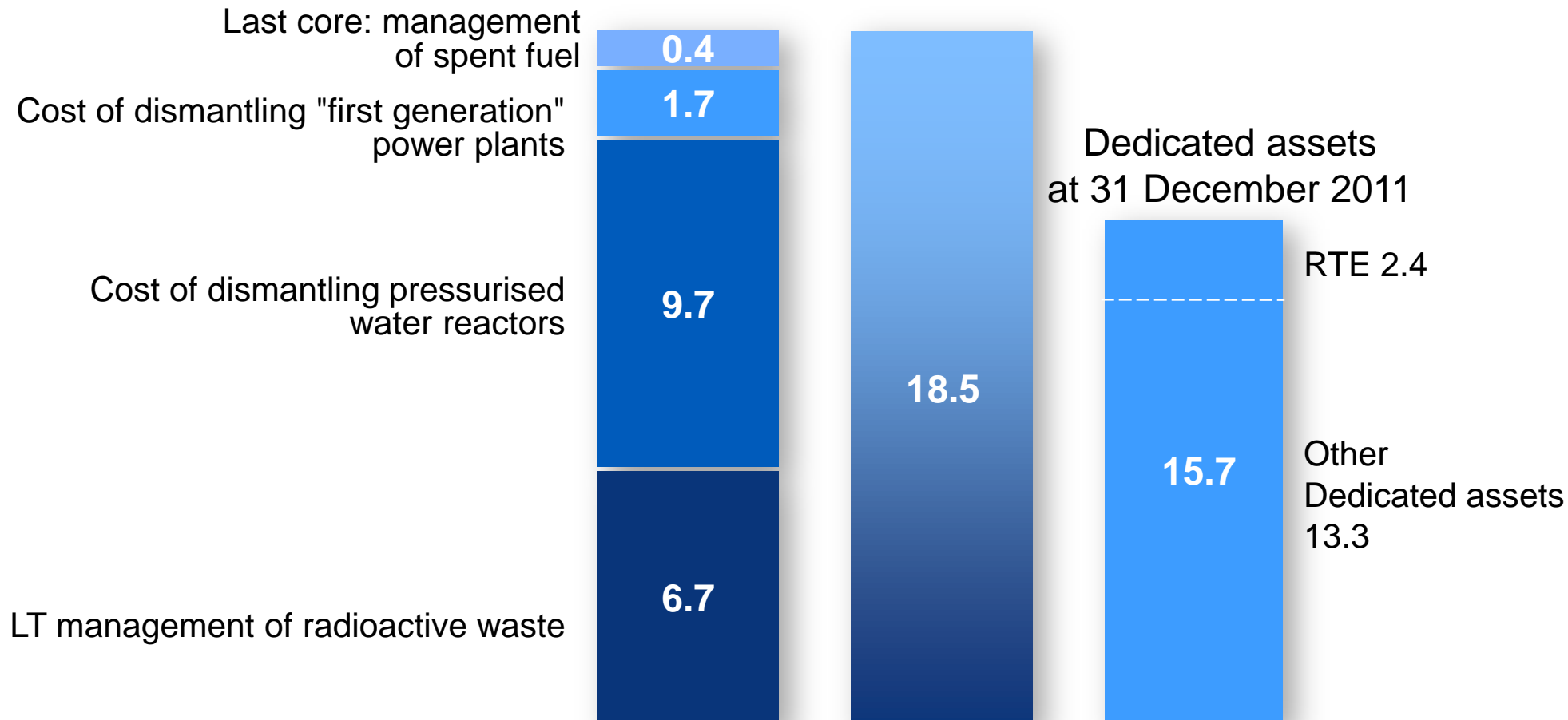
# Principles used in discounting provisions

- Costs are estimated using year-end economic conditions and spread out over a planned timetable of disbursements
  - These costs are determined in constant euros (i.e. the cost as if the payment was made today)
  - These costs are positioned in time on the basis of a timetable set by the company
- The costs are then provisioned on the basis of year-end discounted values



# Calculation base for dedicated assets

**Provisions at 31 December 2011: €18,477m**

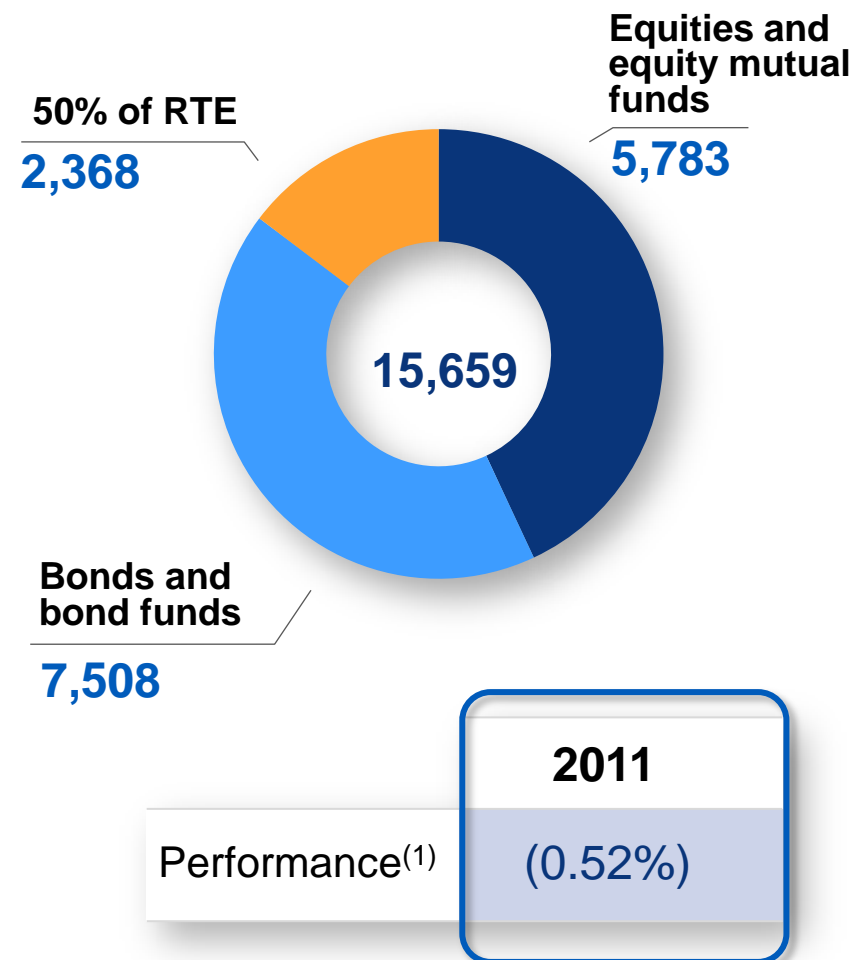


The coverage rate is 87.1%. The Law of 28 June 2006, as amended by the NOME law, requires a coverage rate of at least 75% and sets an objective of 100% by June 2016

## EDF dedicated assets

- Cover nuclear plant dismantling costs and radioactive waste storage and long-term management
- Portfolio set-up deadline originally set at June 2011 and extended to June 2016
- In 2011, EDF adopted a cautious investment strategy, particularly in the second half
  - Exposure reduced to struggling sovereigns
  - Position on equity markets reduced
  - Reinforced weighting of cash and cash equivalent
- RTE shares allocated to dedicated assets played their role as a buffer to overall performance

Portfolio breakdown as of 31 December 2011



(1) Calculated each 6-month period as the average performance of the two sub-portfolios weighted by their initial value compared with -0.1% for the benchmark

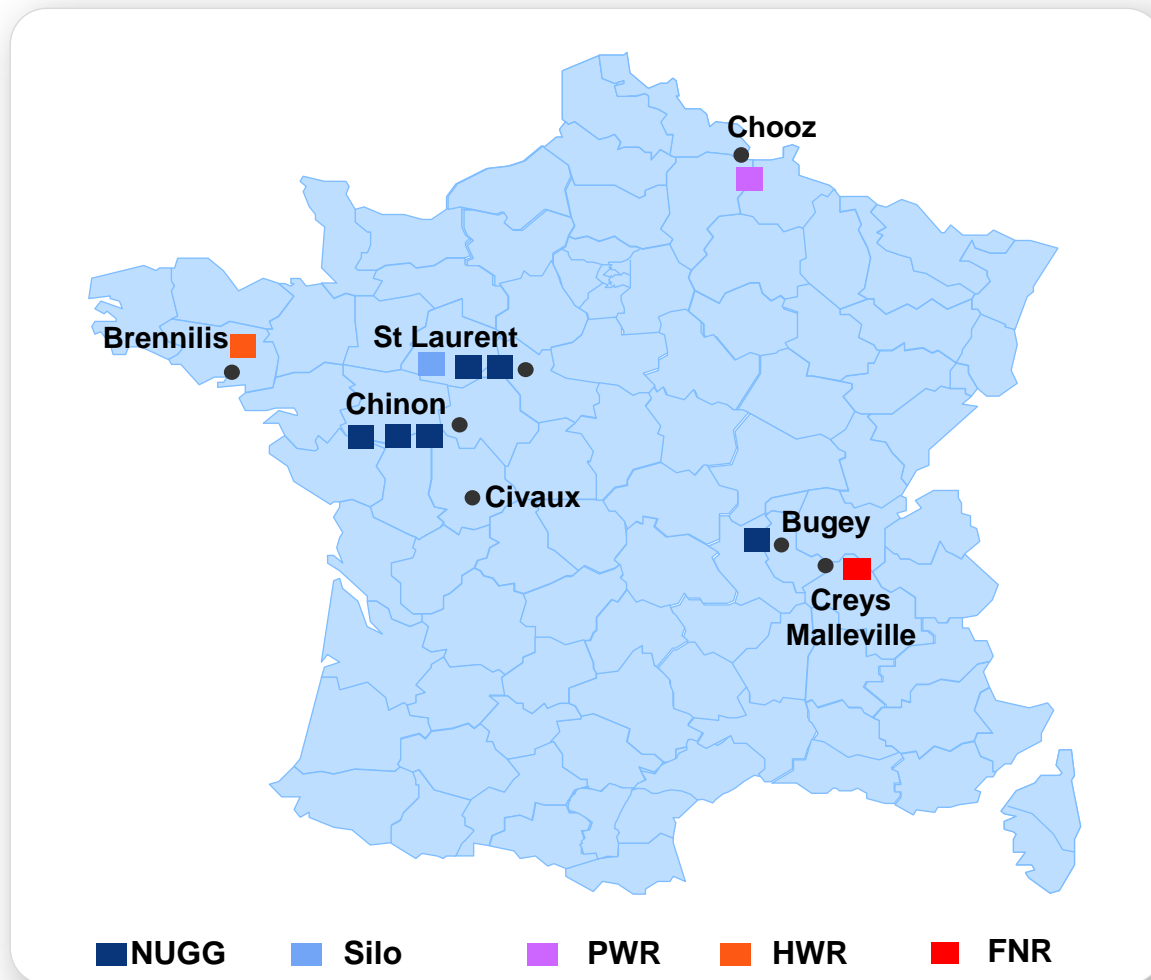
# Regulatory framework for dedicated assets

**Dedicated assets are meant to secure the costs of dismantling nuclear power plants. The portfolio of dedicated assets started to be built in 2000 and is consistent with a regulatory framework set up in 2006.**

- Law of 28 June 2006 (“*loi de programme*” – NOME law of 7 December 2010)
  - A portfolio of dedicated assets was set up with a value equivalent to at least 75% of provisions in mid-2011 and a projected 100% by mid-2016
  - Effective mid-2016, the portfolio’s realisation value must be at least equal to the amount of the provisions covered
  - In the event that it is not, the administrative authority may order corrective measures
- Executive Order (“*décret*”) of 23 February 2007
  - This executive order contains a precise list of assets that are eligible for the portfolio of dedicated assets and their maximum authorised portion, and excludes certain categories of assets
  - It specifies the nuclear costs on which basis the amount of dedicated assets is set and establishes a regulatory ceiling on the discounting rate of liabilities, and a grace period that is based on economic conditions and markets situation and which may not exceed three years
- Executive Order (“*décret*”) of 31 December 2010
  - This authorises EDF to include in its portfolio of dedicated assets, shares in RTE

# EDF nuclear plants being dismantled

In 2001, EDF decided to fully dismantle its nine mothballed plants over a period of 25 years instead of 50 years



- 1 pressurised-water reactor (PWR)
  - Chooz A (300MW): 1967-1991
- 1 heavy-water reactor (HWR)
  - Brennilis (70 MW): 1967-1985 (EDF/CEA)
- 6 natural uranium / graphite gas reactors (NUGG)
  - Chinon A1 (70MW): 1963-1973
  - Chinon A2 (200MW): 1965-1985
  - Chinon A3 (480MW): 1966-1990
  - Saint-Laurent A1 (480MW): 1969-1990
  - Saint-Laurent A2 (515MW): 1971-1992
  - Bugey 1 (540MW): 1972-1994
- 1 fast-neutron reactor (FNR)
  - Creys-Malville (1,240 MW): 1986-1997
- St Laurent A graphite silo

## International dismantling costs feedback

- An OECD-NEA study published in late 2003 listed all costs, in USD (as of 1 July 2001) reported by various PWR operators worldwide, with the following results:
  - Sweden: 93 USD / kW
  - Spain: 166 USD / kW
  - Belgium: 212 USD / kW
  - France: 225 USD / kW (with USD0.85 = 1 EUR)
  - Japan: 405 USD / kW
  - United States: 256 to 420 USD / kW
  - Germany: 270 USD / kW
  - Switzerland: 234 USD / kW
- Excluding extreme values (Sweden and Japan), reported costs are within the same order of magnitude, with France 10 to 15% below average, which can be explained by the series effect that may be reasonably expected for the PWR fleet
- EDF believes that the use of the international benchmark by the “*Cour des Comptes*” strongly underestimates the correction on the management of spent fuels and for the cost difference between the type of plants (especially UK reactors, which are more costly to dismantle), thus inflating its estimate of the dismantling costs

**A level of provisions in line with the international benchmark**

## Benchmark with German nuclear operators

- A direct comparison of nuclear provisions (dismantling and downstream cycle) in EDF's accounts with German nuclear operators' provisions is hindered by the high level of provisions aggregation reported by German nuclear operators
- German nuclear operators' higher level of dismantling provisions, when compared to their installed base, may be due to several factors :
  - **The effect of discounting, as the French fleet is younger:** a 10-year time lag lowers provisions by 25%
  - **Differences in scope:** in Germany, dismantling costs include the costs of building and operating an on-site spent fuel storage building
  - **The effect of greater volumes and standardisation of processes and a lower dismantling cost for PWR reactors than for all the other types of reactors**
  - **Structural differences in organisation and industrial choices** (German reactors are of various types and are run in a decentralised manner, in contrast to the integrated organisation and standardised fleet in France)

**EDF's specific factors explain why its nuclear provisions are lower than for some other operators**

## One installation being dismantled: Brennilis

- The Brennilis reactor, an industrial prototype from the heavy-water series, was jointly operated by EDF and CEA until it was decommissioned in 1985. In 2000, the responsibility as nuclear operator was transferred from CEA to EDF
- The partial dismantling, which began in 1997, is almost complete. All that remains is to carry out the demolition and downgrading of the basement in the effluent treatment building to finalize phase 2
- The site was secured and a new dismantling application was filed by EDF in late July 2008. Following a public inquiry, the investigating commission handed down a negative opinion on the project on 15 March 2010
- This opinion came with a recommendation to undertake certain works
- Decommissioning activities, suspended pursuant to a decision from French State Council (Conseil d'État) are going to start again partially pursuant to a decree of the French Prime Minister issued on 28 July 2011
- Final full dismantling operations resumed at the end of 2011



## Storage of long-lived LLW nuclear waste

- An initial project from 2005 (€14bn<sub>2005</sub>), regularly inflated, serves as a benchmark
- Stepped up cooperation between ANDRA and nuclear operators
  - All task forces (Roussely, experts, Finance Ministry auditors, etc.) recommended that EDF, AREVA and CEA be partners in the project
  - A partnership agreement set up between ANDRA and producers, in order to:
    - call on nuclear operators' expertise in targeted areas
    - organise detachments of skilled persons for the team project
    - step up project governance interface in the role as clients, in light of their legal responsibilities
- EDF, AREVA and CEA have developed an alternative plan that ensures industrial-scale storage and cost control
  - Drawn up with construction professionals
  - Feasible with a tunnel-boring machine
  - Project start-up in 2017
  - Consistent with 2005 estimate

New estimates are expected towards the end of 2012. Until then, the benchmark remains the 2005 cost estimate

# 2011 Annual Results



Appendices - Financing and cash management

# Net financial debt calculation

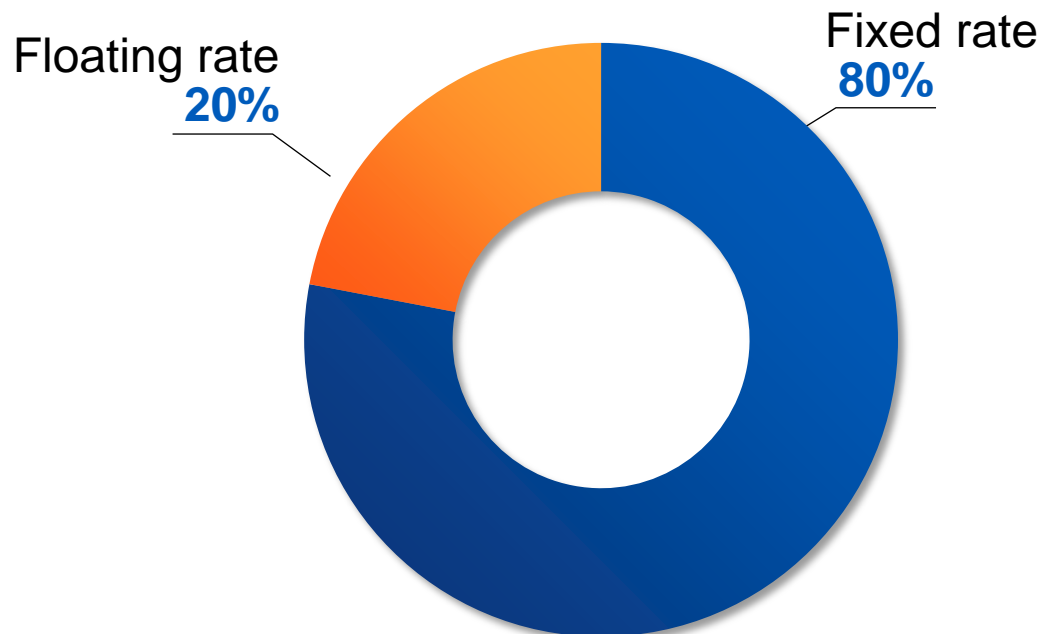
*In millions of euros*

	31 December 2010	31 December 2011
Financial debt (current and non-current)	47,777	50,034
Derivatives used to hedge debt	49	(834)
Net financial debt of companies held for sale	47,826	49,200
Cash and cash equivalents	(4,829)	(5,743)
Liquid financial assets <sup>(1)</sup> (excluding derivatives used to hedge operations)	(11,199)	(10,424)
Financial liabilities related to non-current assets classified as held for sale	2,591	252
<b>Net financial debt</b>	<b>34,389</b>	<b>33,285</b>

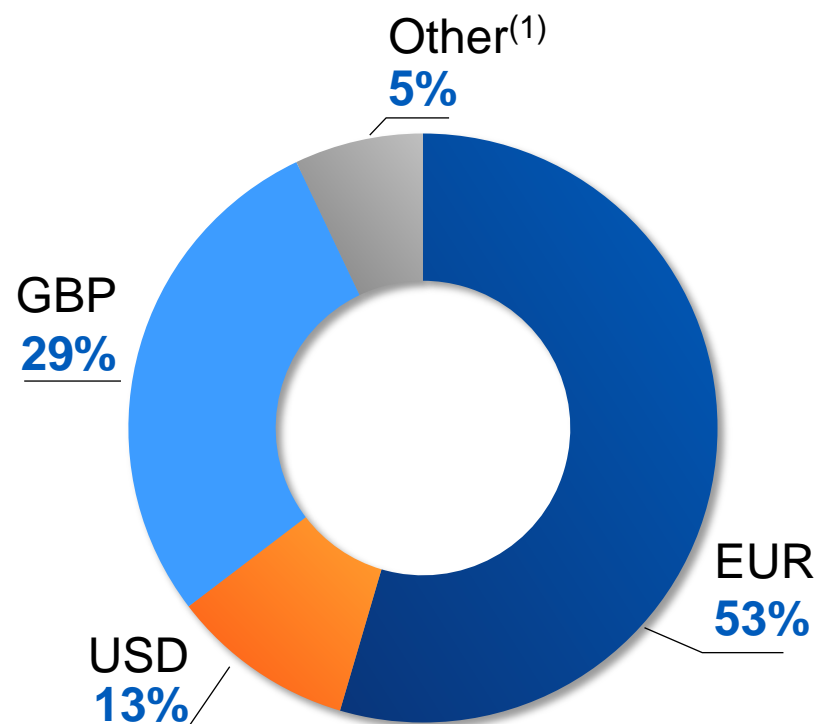
(1) Including loan to RTE (€1,400m)

# Group financial debt after swaps as of 31 December 2011

Breakdown by type of rate



Breakdown by currency



Average coupon: 4.3%  
Average maturity: 9.2 years

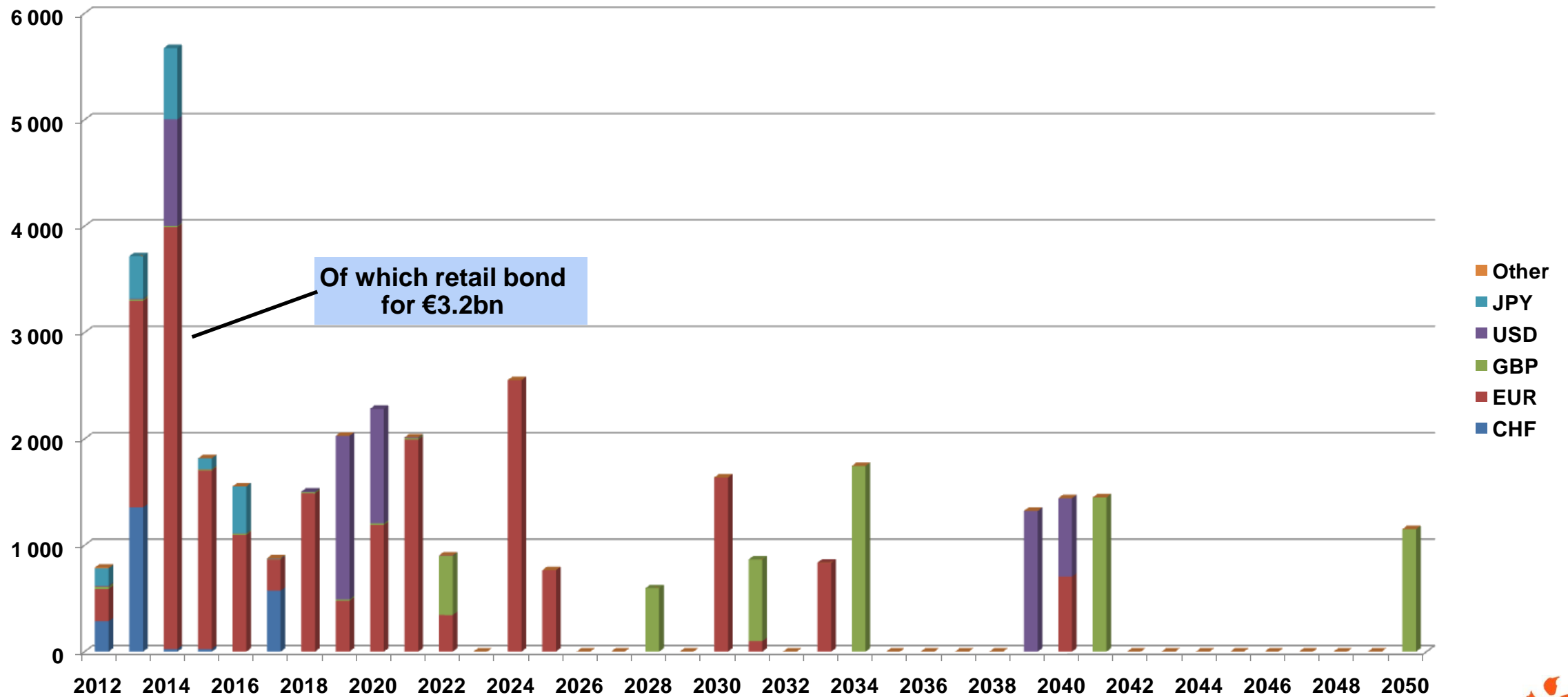
# Financial Data

*In millions of euros*

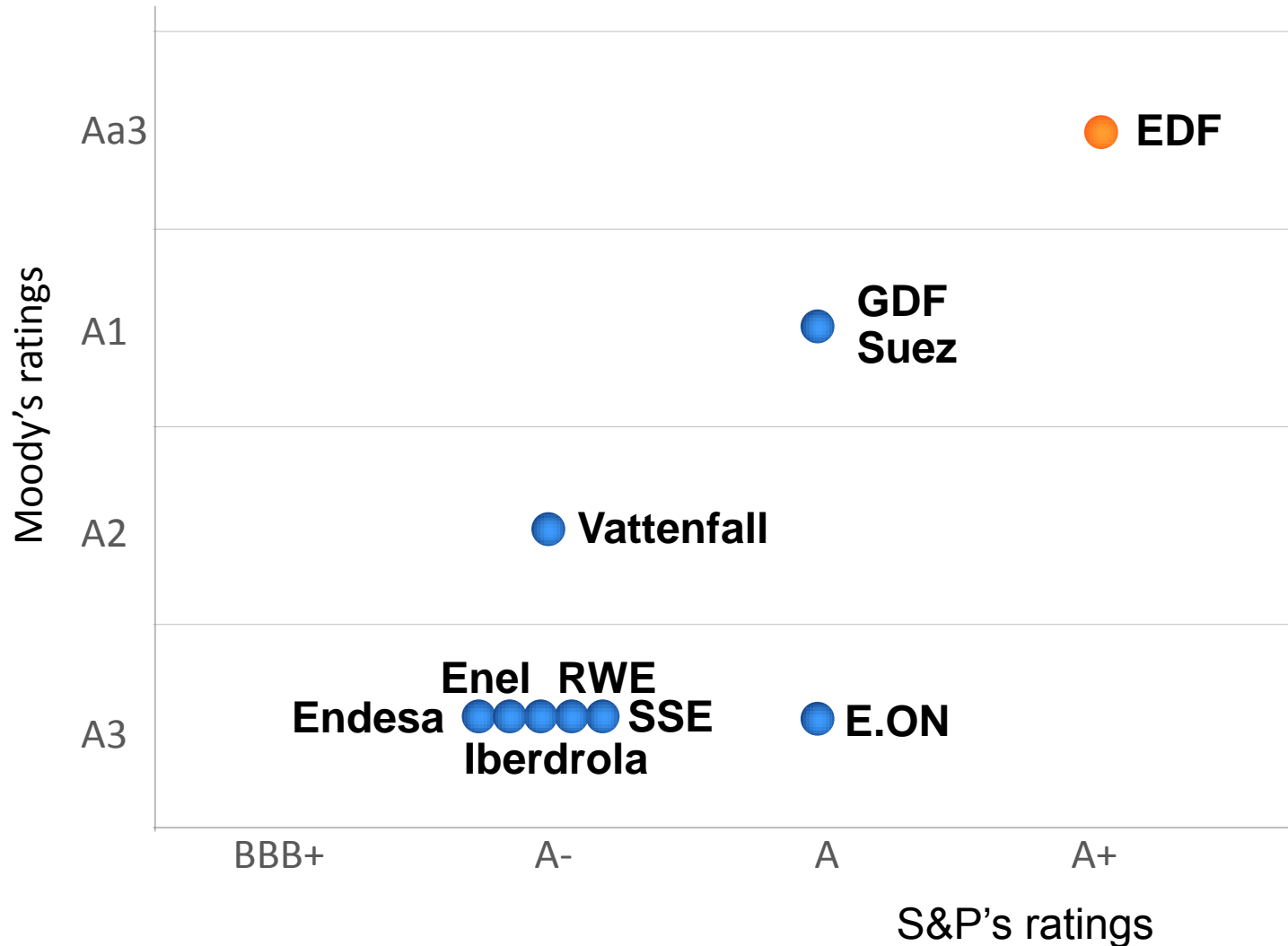
	2009	2010	2010 adjusted	2011
<b>EBITDA</b>	17,466	16,623	14,156	14,824
<b>Net financial charges</b>	1,408	2,197	1,748	1,623
<b>Funds From Operations</b>	11,457	11,446	9,899	10,281
<b>Net indebtedness</b>	42,496	34,389	-	33,285
<b>Shareholders' equity including non-controlling interests</b>	32,725	36,903	-	34,907

# Breakdown of bonds by currency

In millions of euros



# Comparative debt ratings at 30 January 2012



	Ratings S&P	Ratings Moody's	Ratings Fitch
EDF	A+ stable	Aa3 stable	A+ stable
GDF Suez	A stable	A1 stable	NA
EON	A negative	A3 stable	A stable
Enel	A-. Neg outlook	A3 negative	A - stable
Iberdrola	A- stable	A3 stable	A- stable
Scottish & Southern	A - stable	A3 stable	A- stable
RWE	A- negative	A3 negative	A negative
Endesa	A- Neg outlook	A3 negative	A- stable
Vattenfall	A- stable	A2 stable	A- stable

	Rating S&P	Rating Moody's	Rating Fitch
EDF short term	A-1	P-1	F1

Source: Bloomberg, at 30 January 2012



## Schedule for EDF synthetic loan granted to RTE

<i>In millions of euros</i>	<b>Int. rate</b>	<b>31 December 2011</b>
2012 maturity	<b>7.5%</b>	<b>216</b>
2013 maturity	<b>4.625%</b>	<b>500</b>
2016 maturity	<b>5.5%</b>	<b>664</b>
Accrued interest		<b>20</b>
<b>TOTAL synthetic loan granted to RTE by EDF</b>		<b>1,400</b>

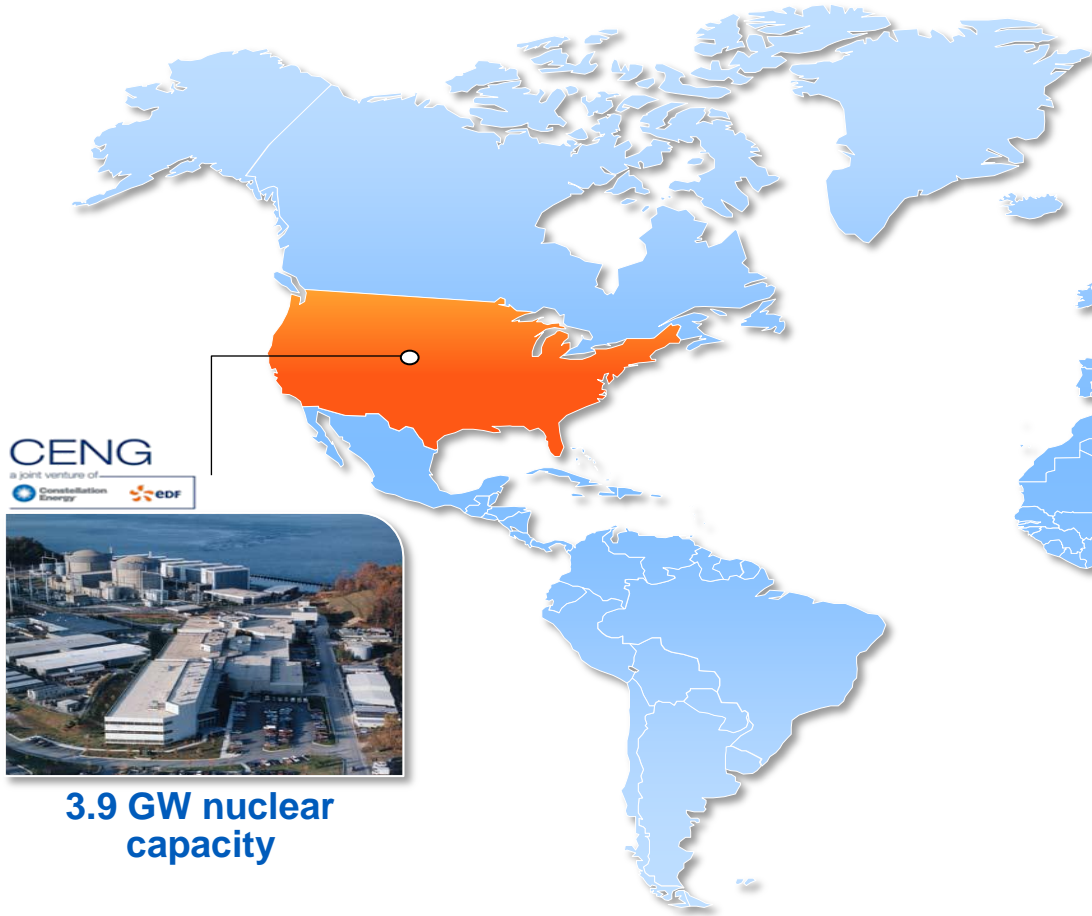
# 2011 Annual Results



Appendices - Strategy & investments

# EDF today

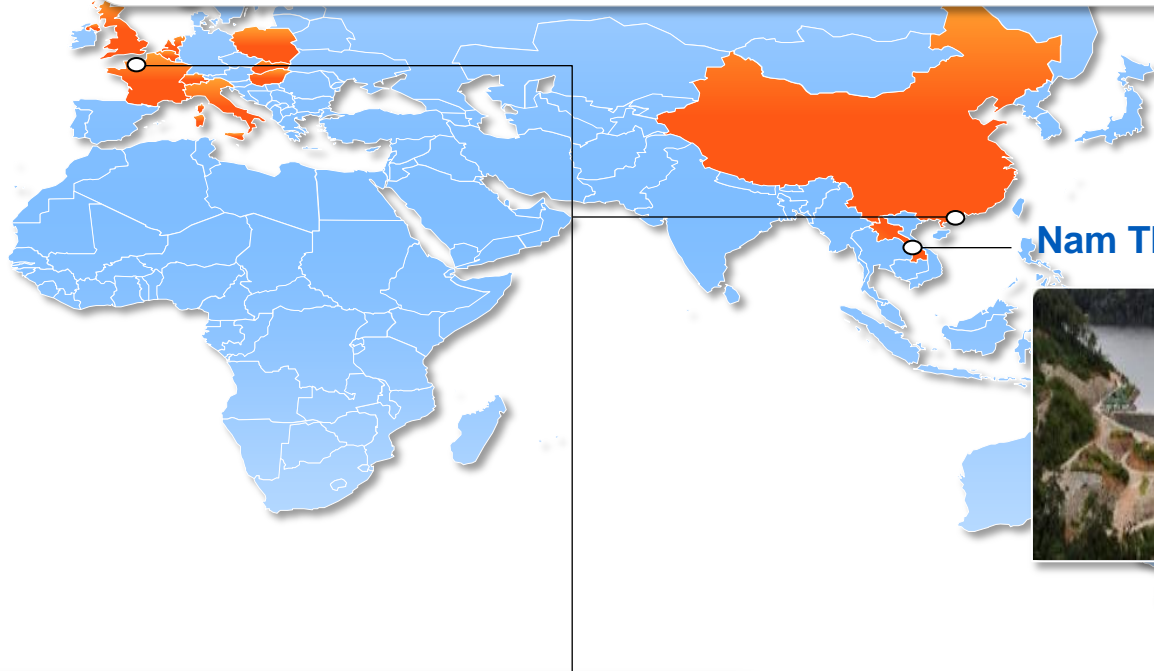
159 GW gross at end-2011



CENG  
a joint venture of  
Comcast  
Energy  
EDF



3.9 GW nuclear capacity



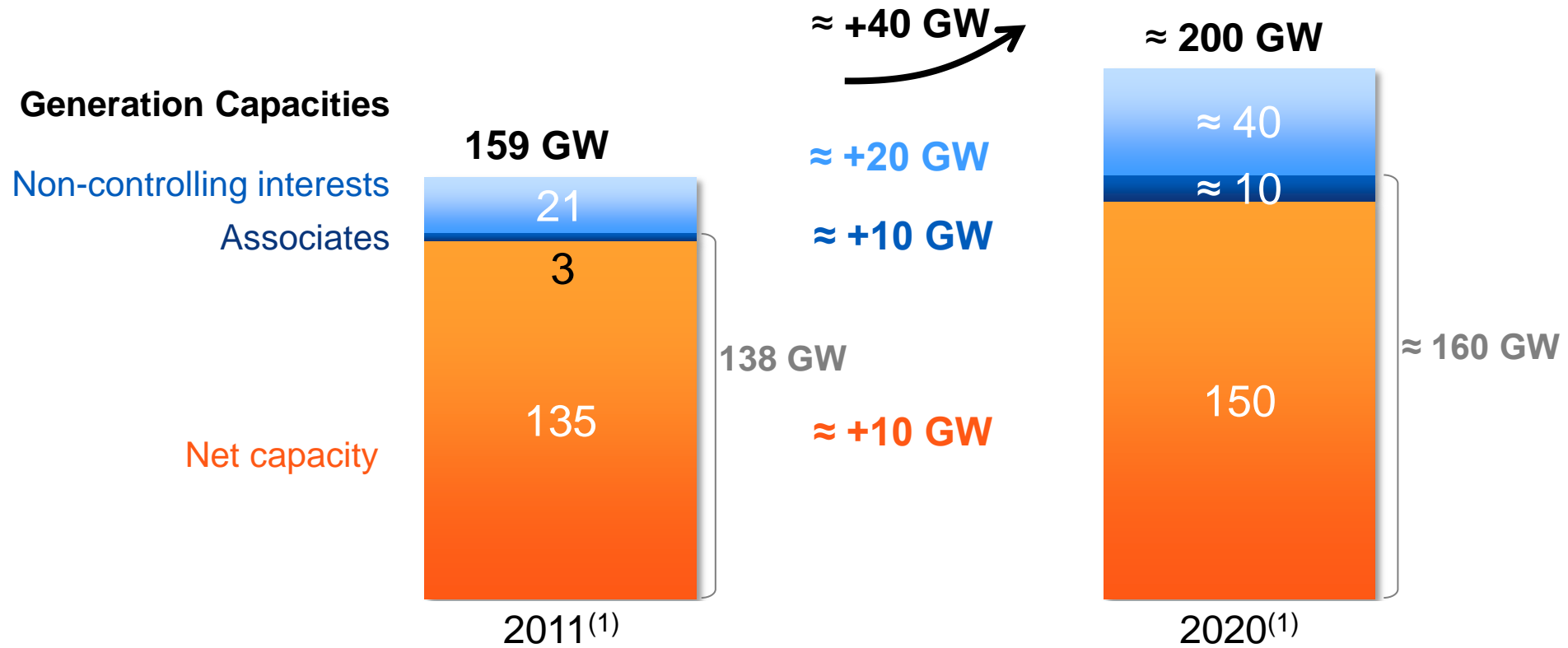
NTPC  
Powering the Future



1.1 GW of hydro capacity

3 EPR under construction of which 1 in France (FLA3) and 2 in China (Taishan 1&2)

# EDF's ambition: 200 GW in 2020

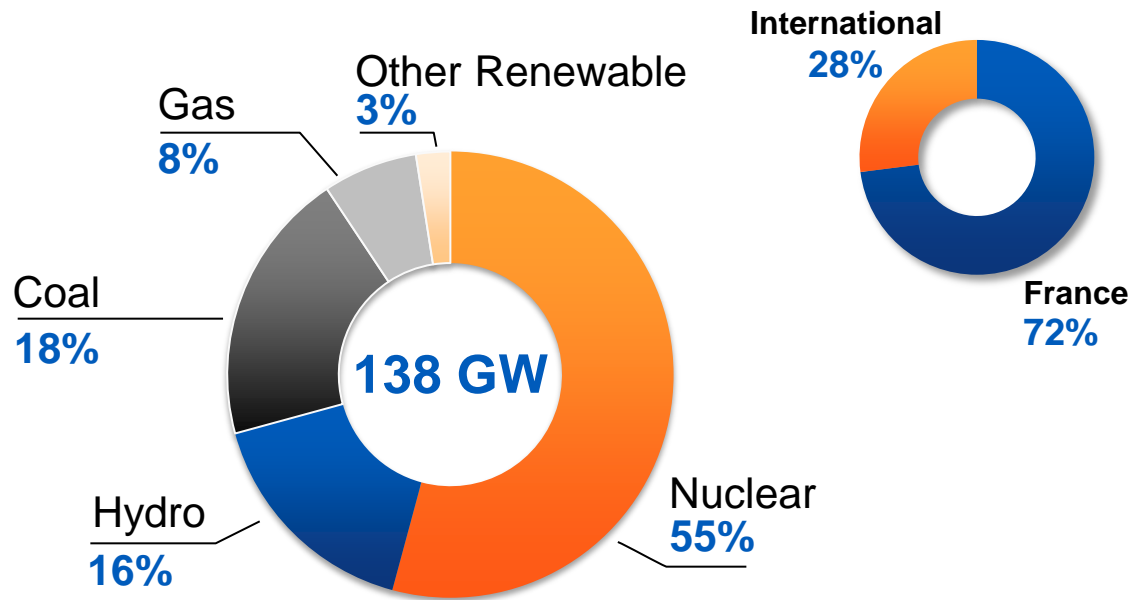


**≈ 20GW of operational investments for EDF Group**

# EDF in 2020: a 75% carbon-free electricity producer

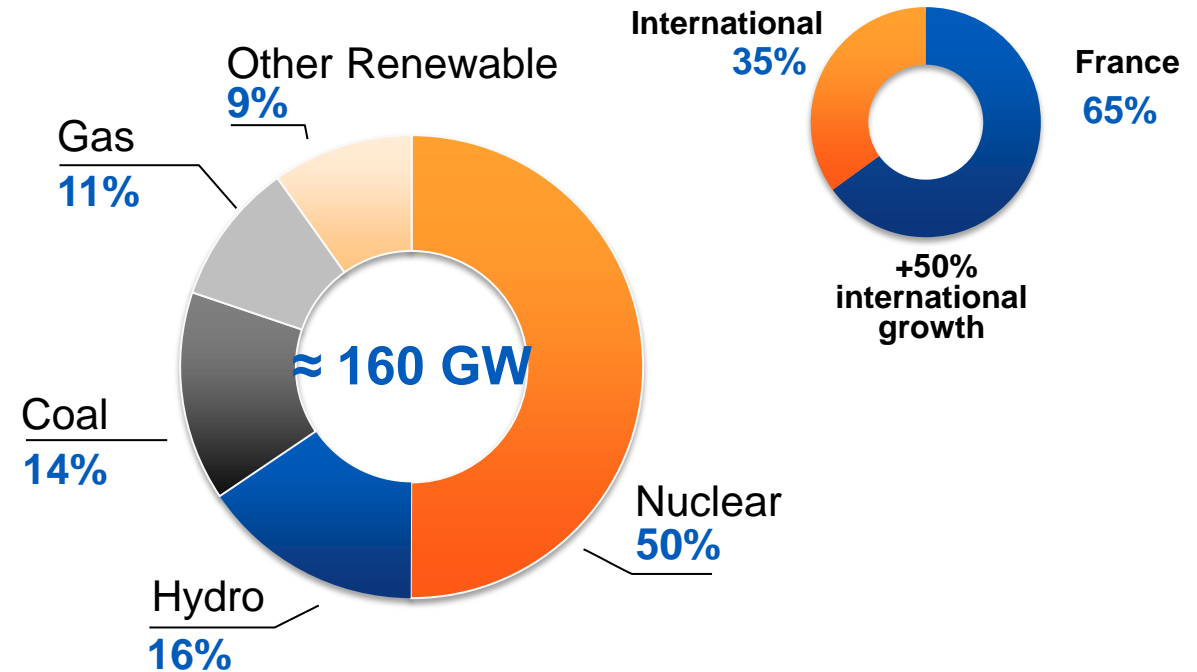
**2011**

Capacity installed (in GW)  
consolidated figure as at 31st  
December 2011



**2020**

2020 installed capacity projections (in GW)



EDF fuel mix – by fuel type and by geographical area

# EDF Group: installed generation capacity in 2011

in GW	EDF	Fuel Mix
Gross		
<b>Capacity</b>		
Nuclear	77.5	49%
Fossil-Fuel	30.2	19%
CCGT	20.2	13%
Hydro	26.4	16%
Other Ren.	4.5	3%
<b>Total</b>	<b>158.8</b>	<b>100%</b>

Non-controlling interests	EDF	Fuel Mix
2.5	75.0	55%
5.3	24.9	18%
8.8	11.4	8%
3.8	22.6	16%
0.5	4.0	3%
<b>20.9</b>	<b>137.9</b>	<b>100%</b>

Associates	EDF	Fuel Mix
Net		
0.2	74.8	55%
1.2	23.7	18%
0.7	10.7	8%
1.2	21.4	16%
0.1	3.9	3%
<b>3.3</b>	<b>134.6</b>	<b>100%</b>

**Total installed capacity of all the plants in which EDF Group has interests**

**EDF generation capacity including shares in associates**

**Generation capacity shown in the activity and sustainable development report**

# Flamanville 3 EPR: a first of a kind achievement, the feedback of which will benefit other projects

- Close cooperation with Areva teams on the French and Finnish EPRs
- Organisation designed to encourage Flamanville 3 feedback for the other projects
- An in-depth analysis of Flamanville 3 to improve scheduling for next EPRs:
  - 20 months of savings identified in Flamanville 3's first four years
  - Impact already seen at Taishan



# An update on the Flamanville 3 EPR project

- First marketable production targeted for 2016
- Construction costs of about €6 billion
- How far along is construction?
  - More than 88% of civil engineering completed
  - Engine room construction completed  
Turbo-alternator unit components being delivered
  - A full-scale simulator has been brought into service
  - Almost 21% of electro-mechanical assembly completed
  - Reactor dome scheduled for summer 2012
- Project monitoring stepped up between EDF and its partners
- ASN review process:
  - Changes in monitoring and control: a favourable opinion from the Permanent Group of Experts in June 2011
  - Commissioning application currently being reviewed



## China (TNPJVC)

### Taishan 1 & 2 (EDF 30%)

- 2 EPRs under construction
- Construction work carried out in 2011:
  - Civil engineering work
  - Electro-mechanical assemblies
  - Dome installed on Unit 1 reactor building
  - Delivery of Unit 1 reactor vessel
- Commissioning of Unit 1 scheduled for 2014 and Unit 2 for 2015



# Dunkirk methane terminal project

- The Dunkirk methane terminal, in operation in 2015, will be made up of the following installations:
  - an entry point for around 120 methane tankers a year
  - a liquefied natural gas (LNG) unloading system
  - three LNG storage tanks holding 190,000cm each (each tank is around 50m high and 90m in diameter)
  - a regasification unit (from -160°C to 0°C)
  - a sea water intake for heating the LNG. For this project, part of the cooling waters from the nearby Gravelines nuclear plant will be used to reheat the LNG
  - a pipeline to the gas transport network in France and Belgium
- Three project managers will be involved in the project:
  - Dunkirk Port Authority (“Grand Port Maritime de Dunkerque”) will build the port infrastructure consisting of a dock, unloading platform and a platform for the industrial infrastructure covering around 50 hectares partly reclaimed from the sea
  - EDF will, via its subsidiary Dunkerque LNG (65% EDF, 25% Fluxys, 10% Total), build the industrial infrastructure for unloading, storage and regasification of LNG as well as the roadways and facilities needed for the terminal's operations (totalling €1bn<sub>2010</sub>)
  - GRTgaz will lay the pipes that will carry the revaporised gas to the gas transport network
- Overall terminal capacity will be 13 Gm<sup>3</sup>/year, representing 20% of France LNG imports capacities. EDF will be one of the main users, with other partners such as Total



# RUDA: project for an advanced supercritical coal-fired unit (900 MWe) in Rybnik, Poland

## Financial characteristics:

- Investment approx. €1.8bn
- Project within the 2011-2015 capex plan meeting new investment criteria announced on 29 July 2011

## Technical specifications:

- Replacement of 4 existing units: commissioning due in early 2018
- **Industrial plan:**
  - EDF, architect-assembler for the project
  - Alstom will provide the power block (boiler island and turbine hall)
- **Efficiency of 45% vs. 37% currently**
- **Environmental impact reduced:**
  - 22% fewer CO<sub>2</sub> emissions (8% via biomass co-combustion)
  - 5-fold reduction in dust and sulphur oxide
  - Nitrogen oxide emissions cut in half



**15% increase in the site's annual output, serving 6.4 million people in Poland**

# Nuclear New Build

## UK: significant progress made in 2011

- The UK government re-affirms that it is continuing its nuclear programme
- July: The "Nuclear Site Licence" for Hinkley Point approved by the nuclear safety authority.
- November: Building permit approved by the Infrastructure Planning Commission (IPC)
- December: The safety authority gives a preliminary green light to the design as part of the EPR certification process
- Preparation of main tender offers for the earthworks, civil engineering and the turbine room
- Second half 2012: EDF decides to invest in an initial pair of EPR reactors

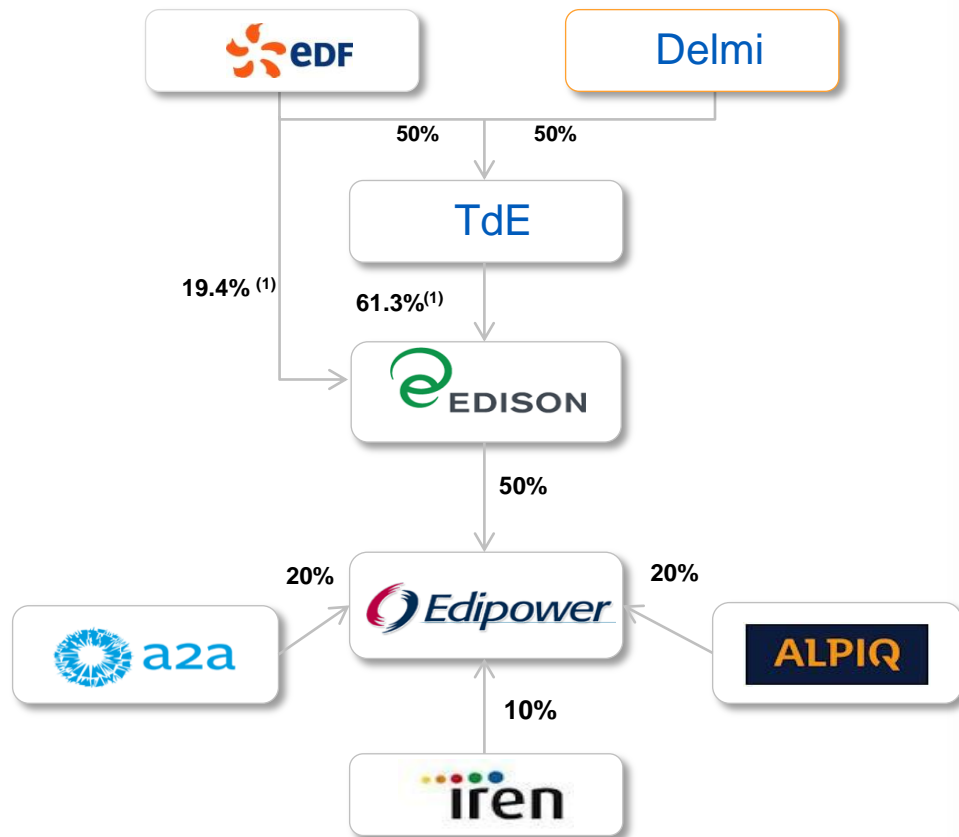
## United States

- Continued actions performed aiming to obtain a license for the EPR in the US



# Edison before transaction and after transaction

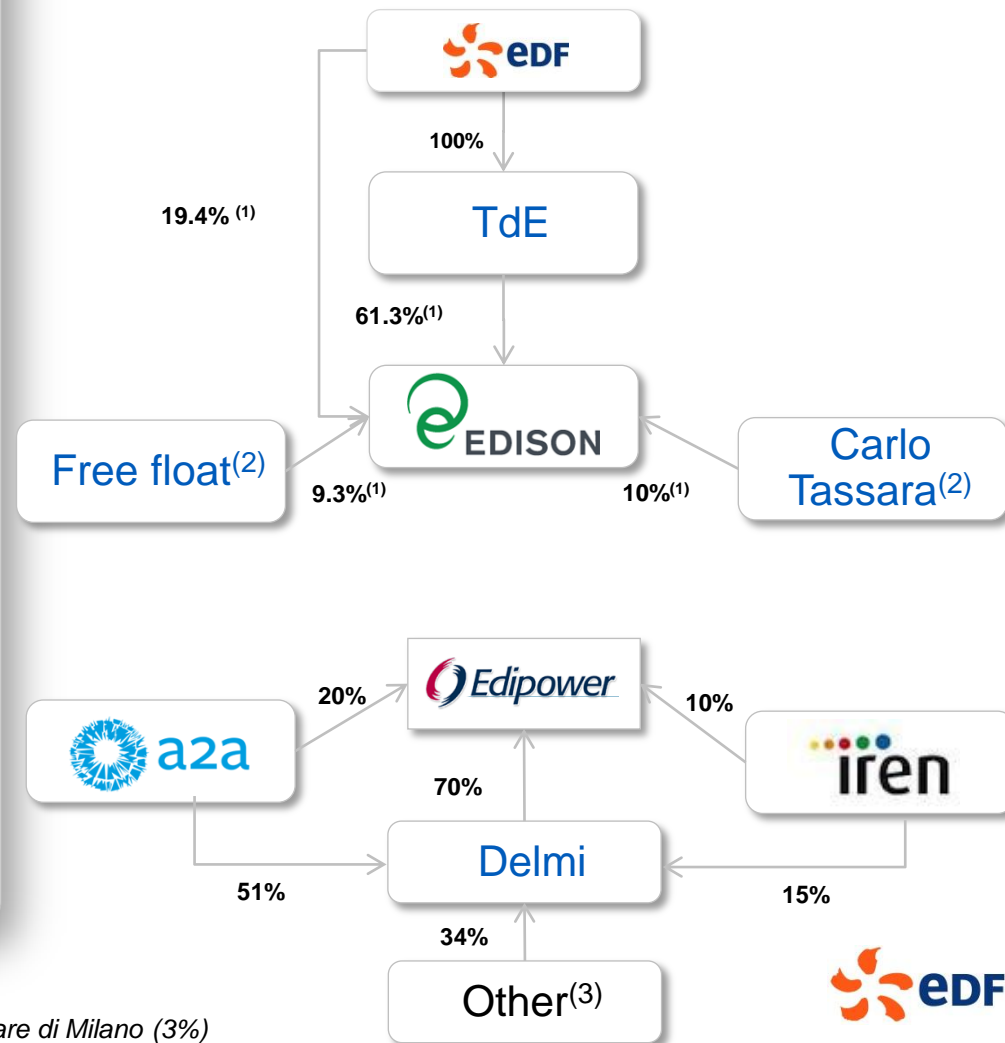
## Edison today



## Key steps

- Acquisition of Delmi's 50% interest in TDE by EDF
- Exclusive control of Edison by EDF (80.65%-owned)
- Disposal by Edison of 50% of Edipower
- MTO on Edison's minority interests at €0.84 per share

## Edison post industrial & shareholder reorganisation<sup>(1)</sup>



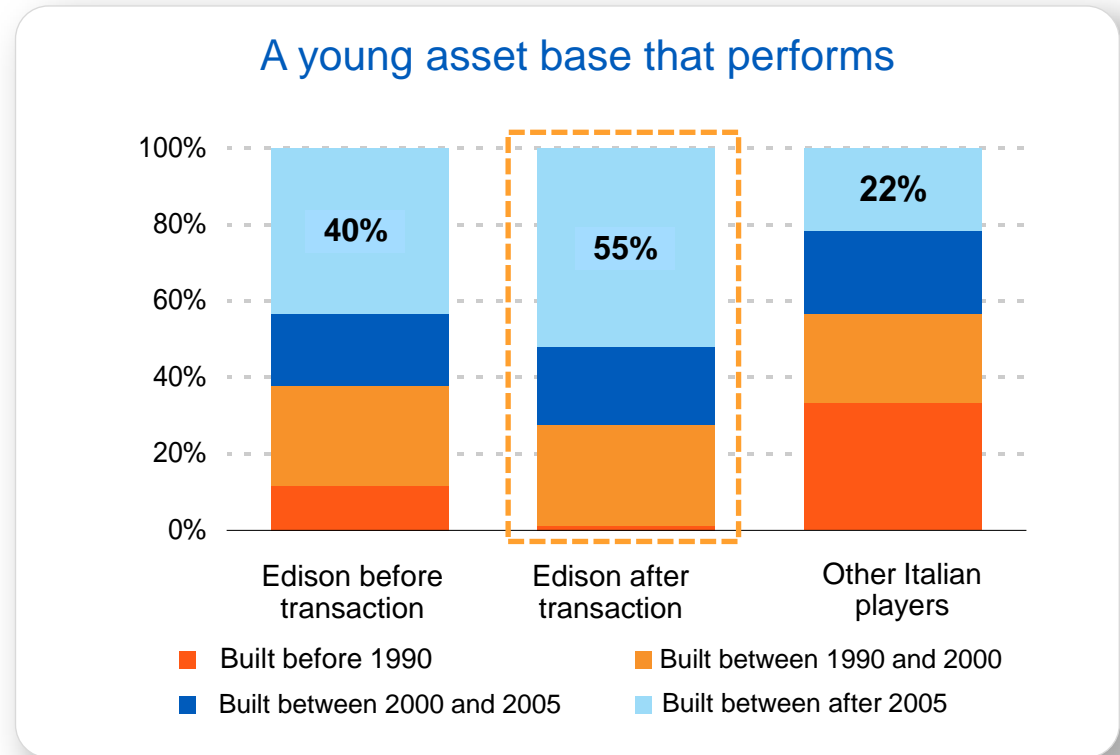
(1) % shown correspond to voting rights

(2) Assuming no shares tendered as part of any potential MTO

(3) Other shareholders: Dolomiti Energia (10%) / SEL (10%) / Mediobanca (6%) / Fondazione CRT (5%) / Banca Popolare di Milano (3%)

# Edison generation net capacity in Italy post-transaction

- 2<sup>nd</sup> largest gas company in Italy with 15bcm purchased and 11bcm sold to third parties
- 3<sup>rd</sup> electric company in Italy with 7.0 GW<sup>(2)</sup> of fully-controlled capacity
- 1.4 million end customers in Italy, balanced between gas and electricity

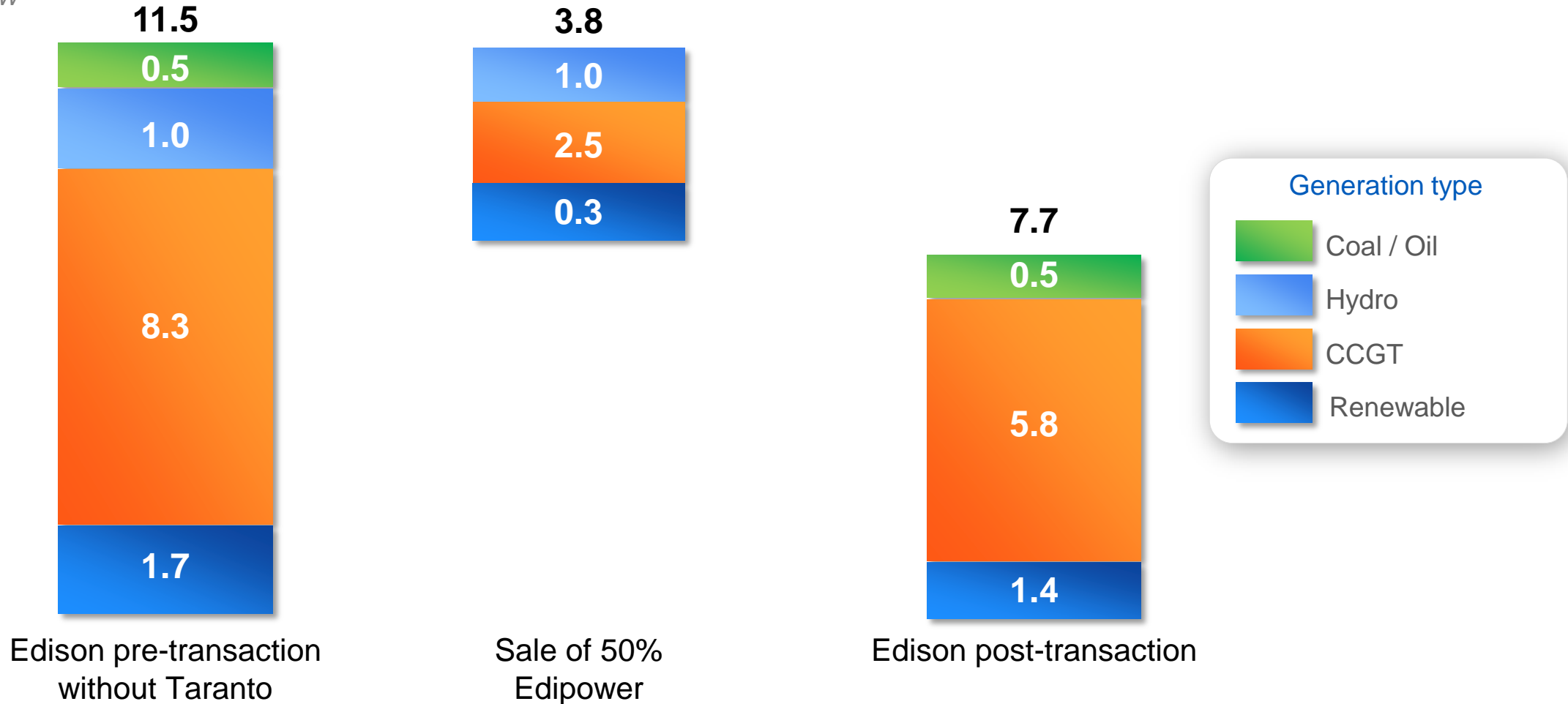


A more competitive energy mix that complements EDF's mix

(1) Including Acea, A2A, Edipower, Enel, ENI and E.On  
 (2) 7.7 GW including activities excluding Italy

# Edison generation net capacity in Italy post-transaction

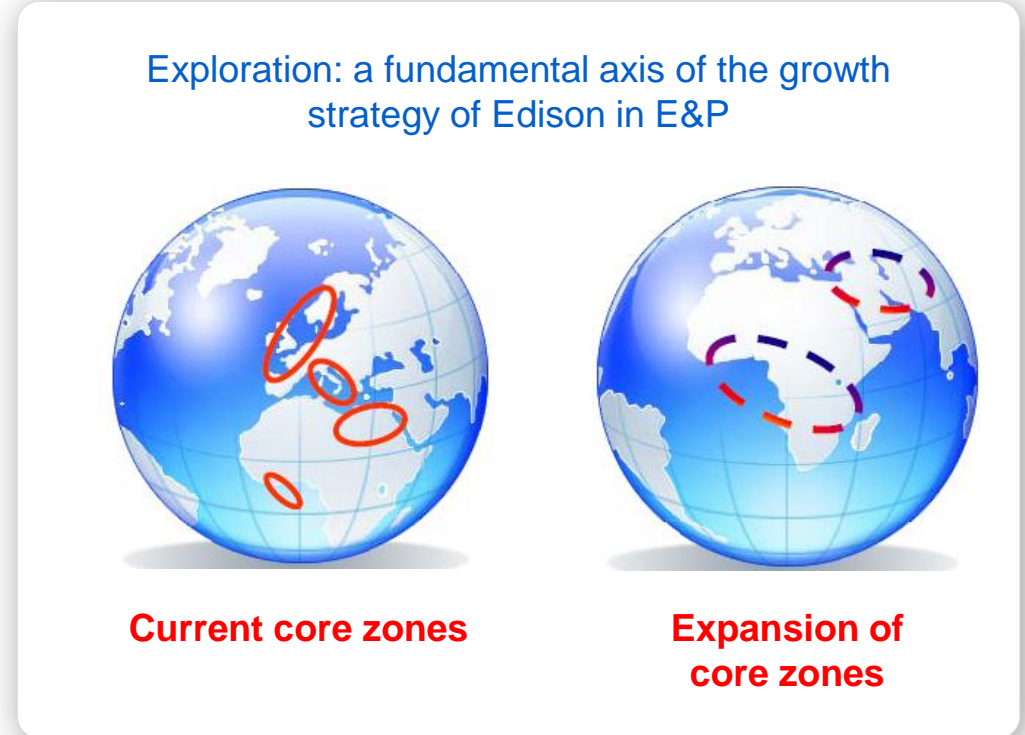
Net capacity in GW



# Edison's hydrocarbons activities

## Exploration & Production (E&P)

- Strong position, mainly as an operator: Italy, Egypt, Norway
- Significant growth potential through exploration in core zones and to a lesser extent in new zones
  - Successful historic exploration effort with reserves replacement of 143% in the 5 past years
  - Expertise in quality exploration and in ponds similar to today's most attractive areas: Iraq, West Africa
- High engineering capacities and E & P expertise
- Reserves as at end-2011: 49,8bcme
- 2010 gas / oil production: 2.8bcme



# Edison, a strategic hydrocarbon positioning



Edison headquarters and representation



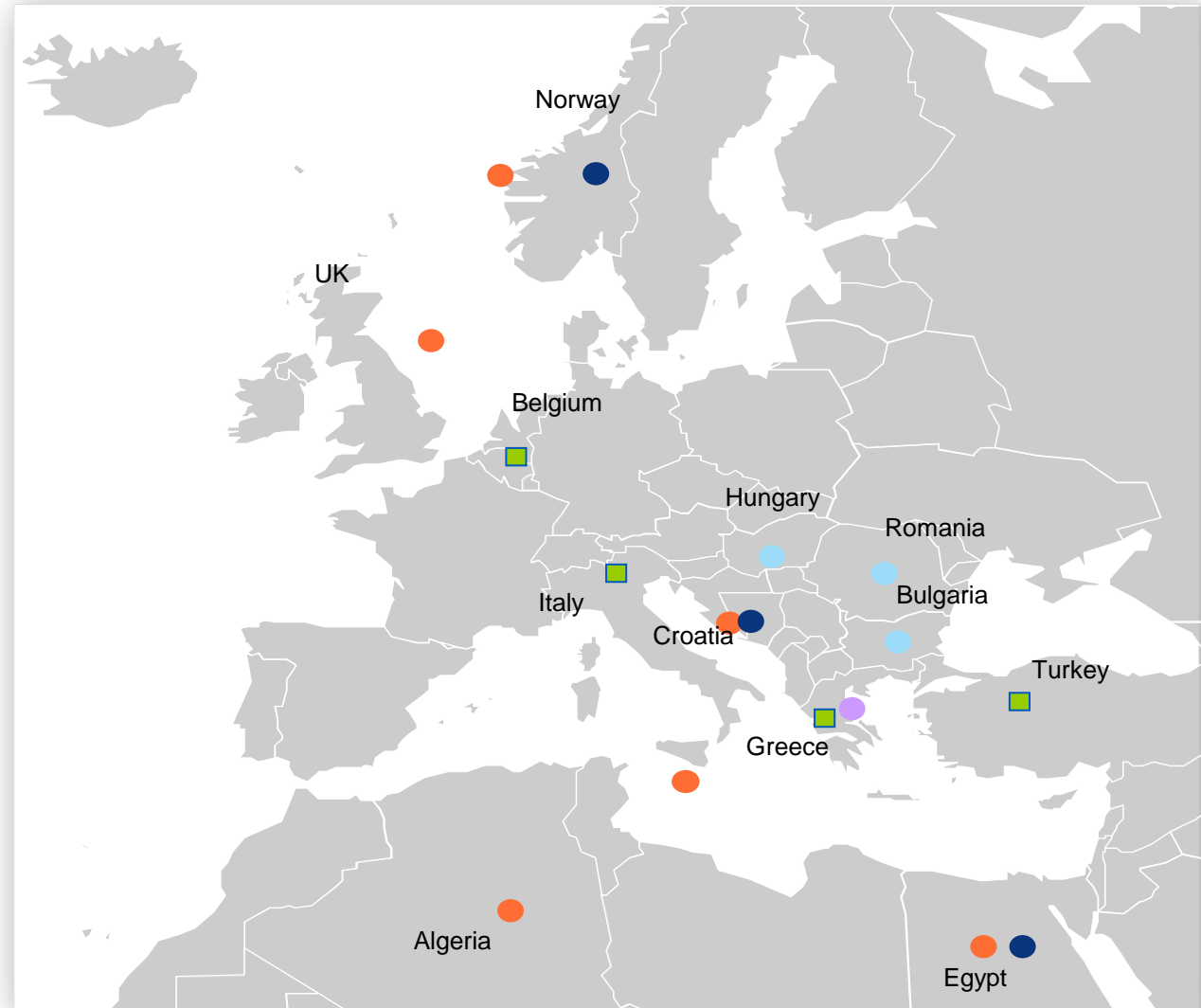
Hydrocarbon concession



Trading branch



Hydrocarbon branch



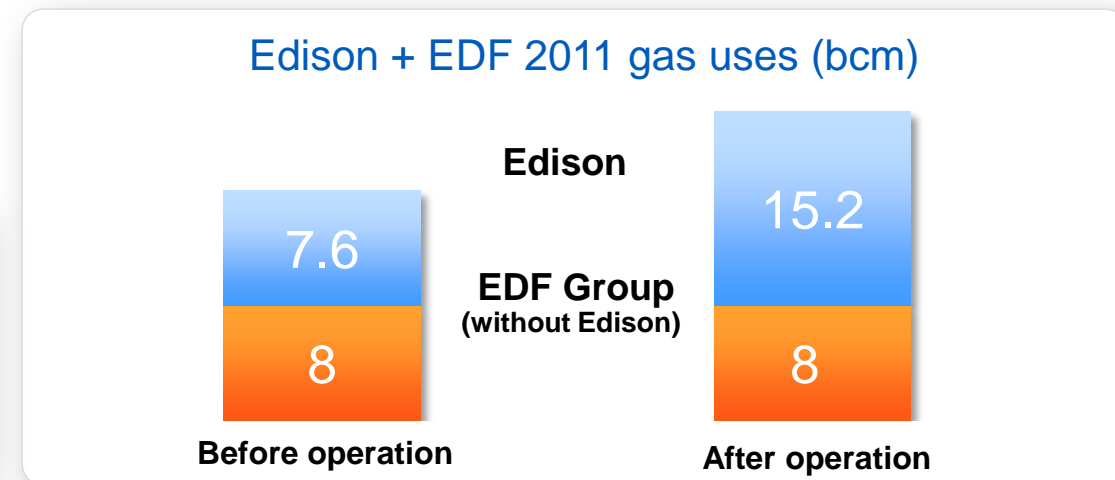
# Gas contract

## Hypotheses

- New –year gas supply contract for Edipower by Edison covering at least 50% of the needs
- Gas contracts renegotiations (Qatar, Libya, Algeria)
  - Renegotiations on Libya and Qatari contracts should be ended by 2012 second-half and in 2013 for the contract with Algeria
  - Total volume of Long term gas contracts 14.4 bcm

## Contractual structure

Contract	Volume / year (bcm)	Expiration	End of renegotiations
Norway	1.4	2011	2011
Russia	2	December 2019	2011



# Edison Italian gas assets

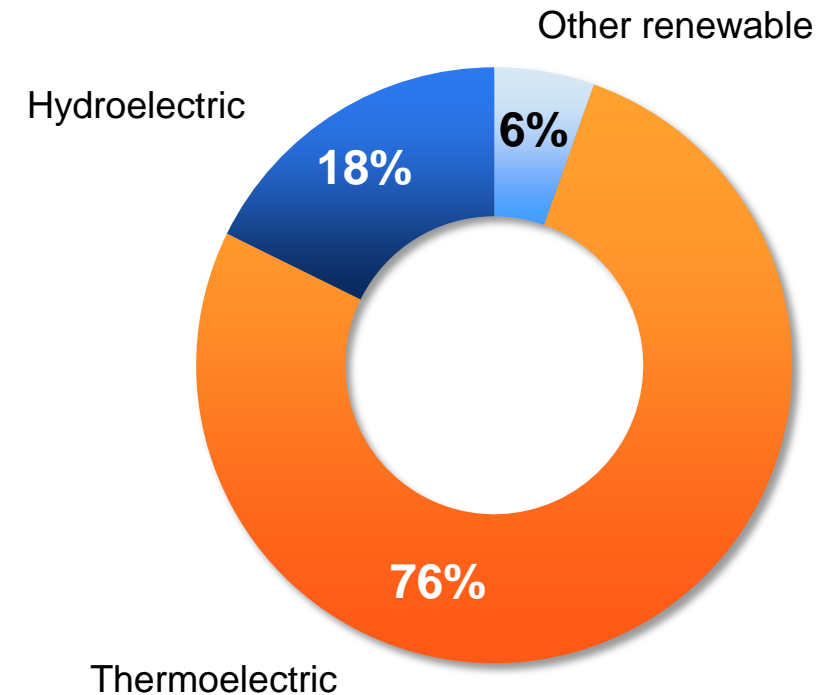
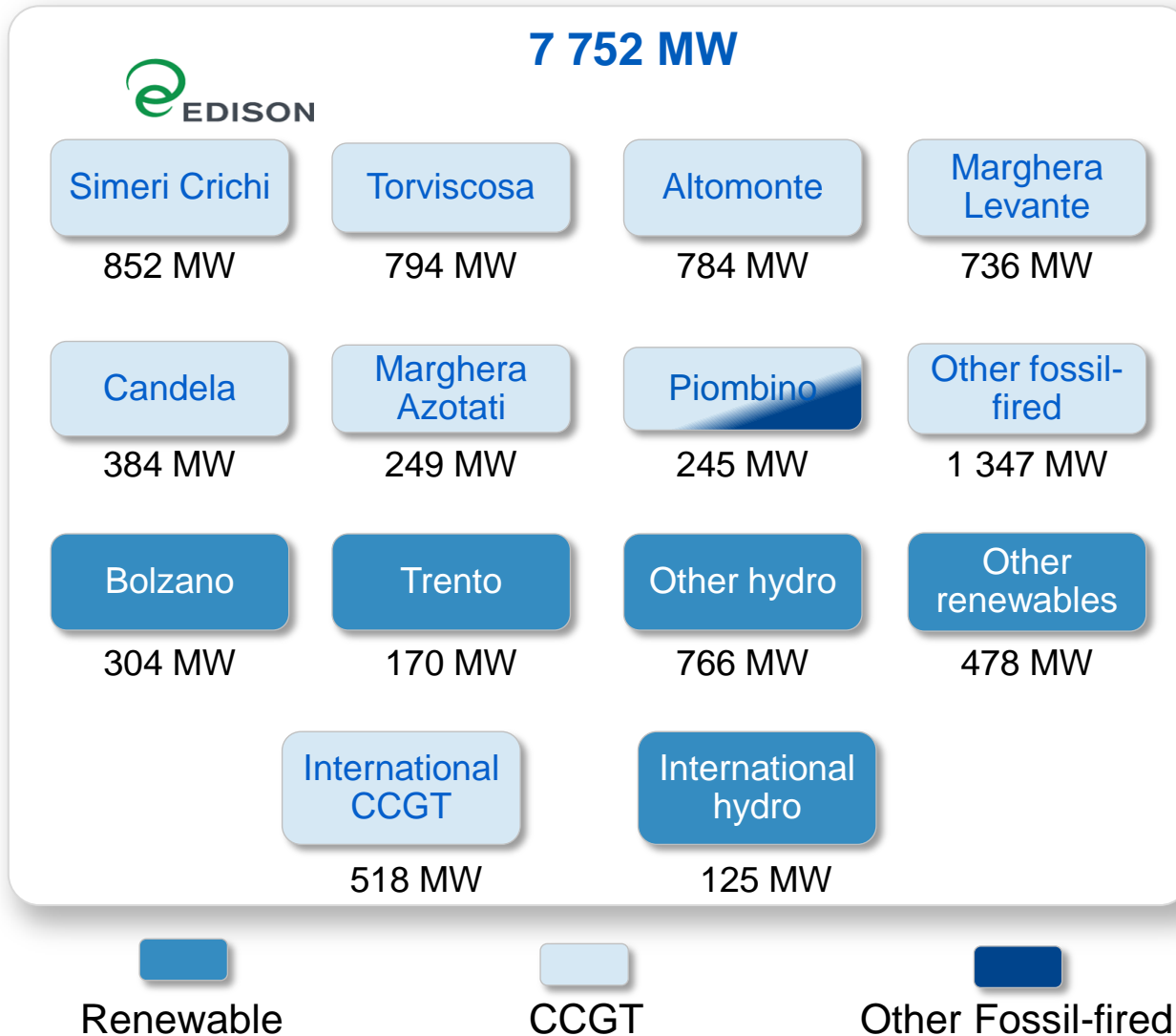
524,000 clients in Italy



## Edison's gas activity

- 2 gas storage centres
  - Cellino
  - Collalto
- 1 gas storage centre in development
  - San Potito-Cotignola
- 1 LNG terminal: Adriatico
- Gas infrastructure projects:
  - ITGI Poseidon and Galsi
- 2010 importations per pipeline+LNG: 11.8 bcm
- 2010 Domestic purchasing: 2.7 bcm

# Edison's fleet – Figures as at 31 December 2011

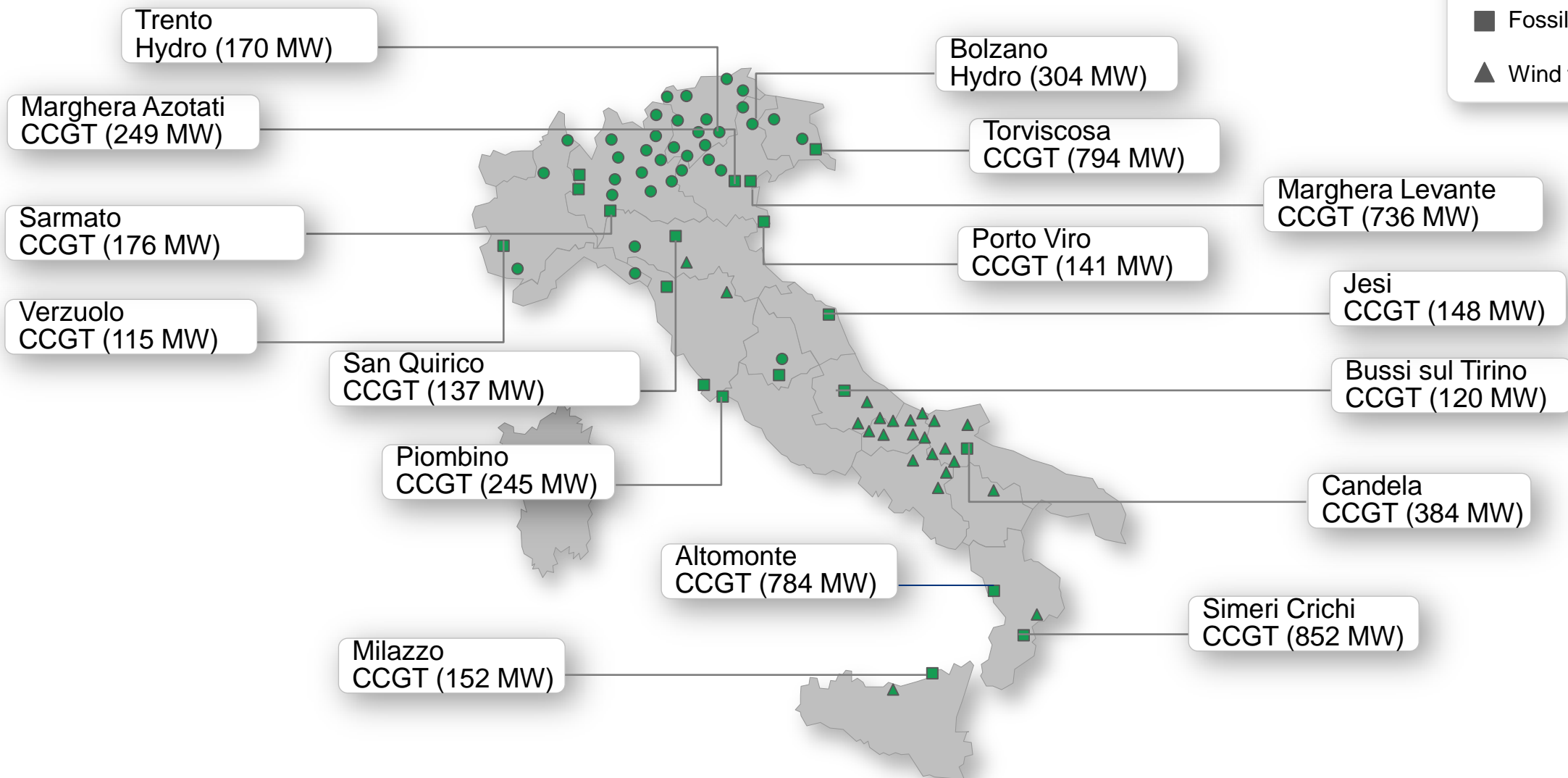


**847,000 clients in Italy**

# Edison power plants

**EDISON Plants**

- Hydro plant
- Fossil-fired plant
- ▲ Wind farm

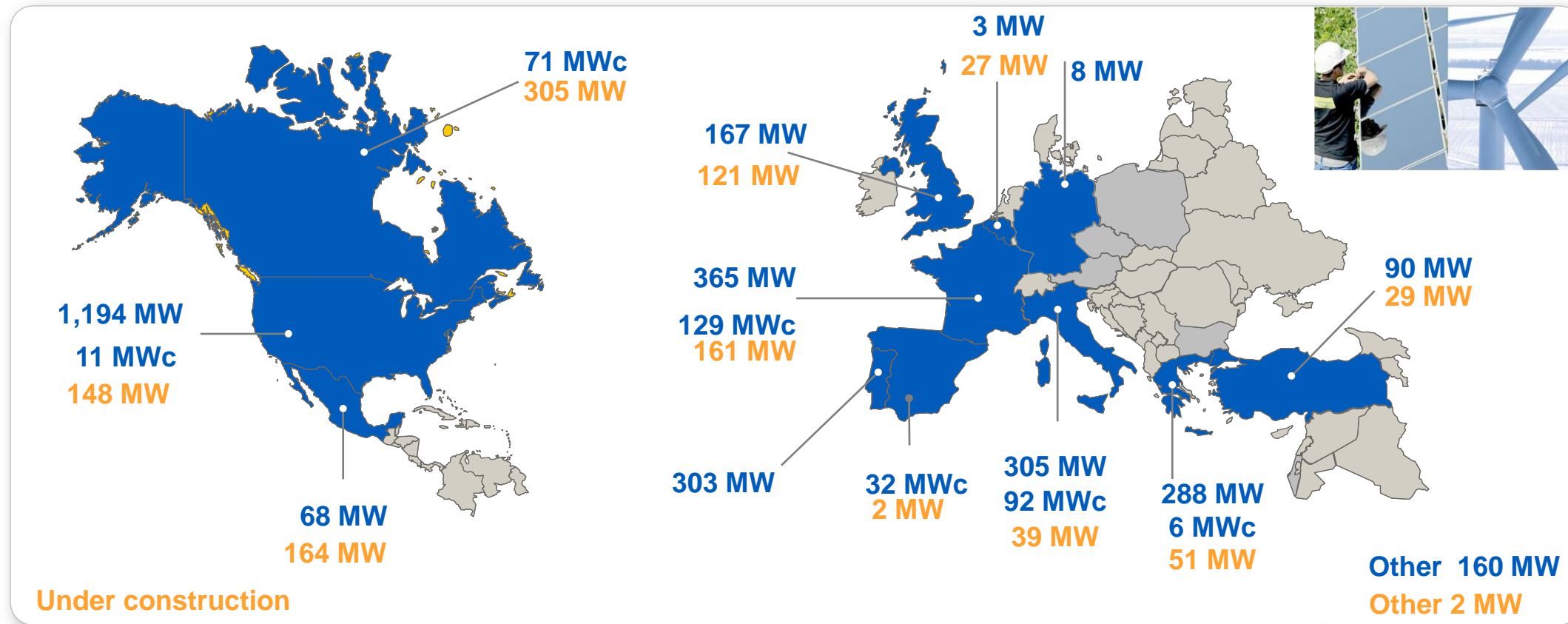


# 2011 Annual Results



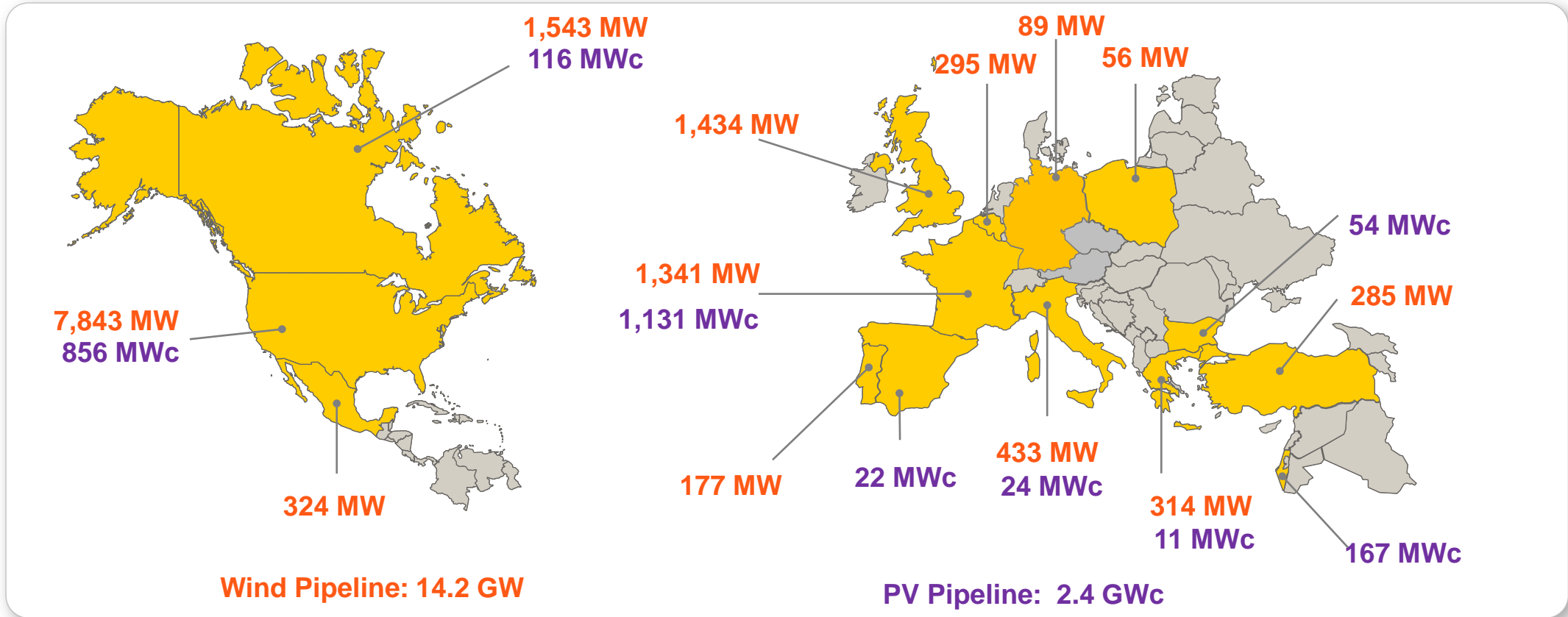
Appendices - Renewable energies

# EDF EN installed capacity at 31 December 2011



	Gross	Net
Installed capacity:	4,124.7 MW	3,291.6 MW
Capacity under construction:	1,781.5 MW	1,048.9 MW

# EDF: a significant portfolio of renewable projects (excluding hydro)



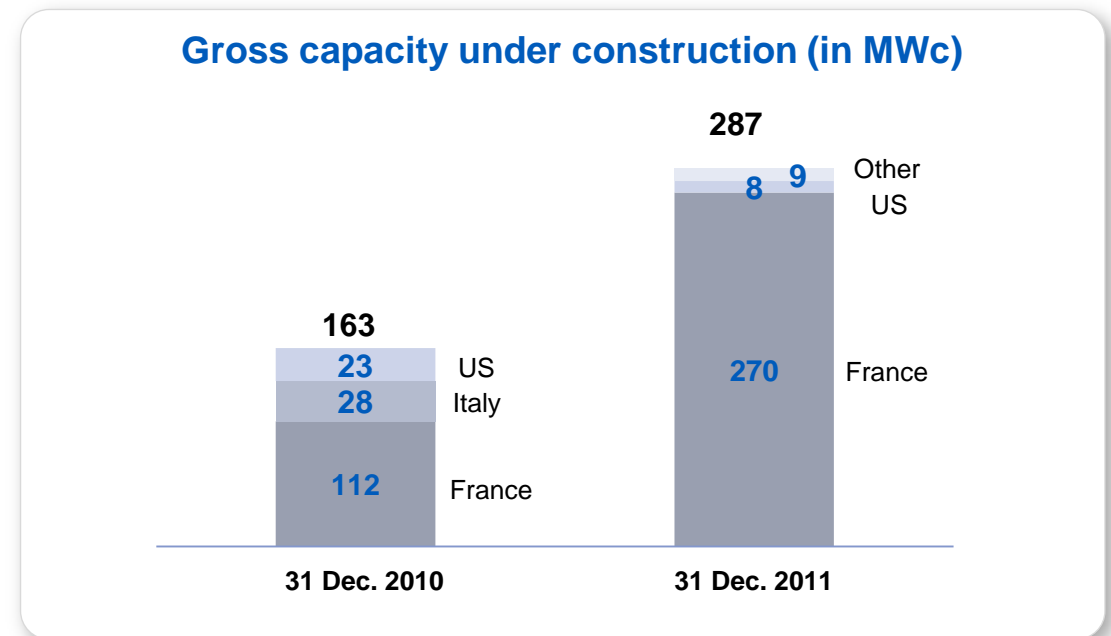
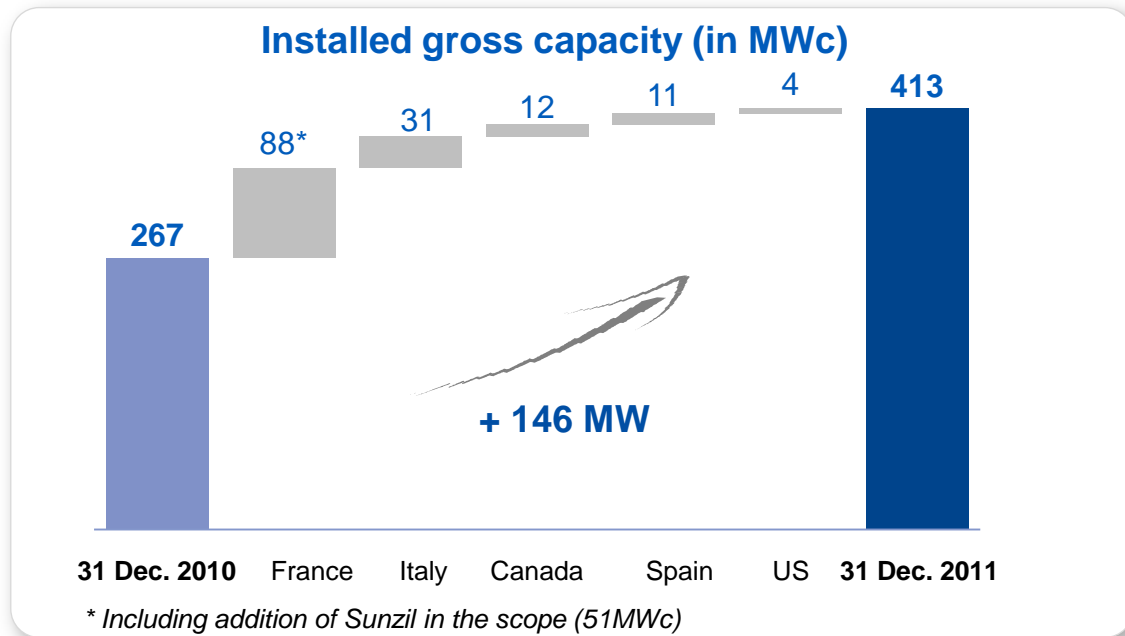
A pipeline of about 16.6 GW

Source : EDF, EDF EN. Note: pipelines are indicated for EDF EN  
Wind Pipeline in South Africa amounting to 111 MW

# EDF EN – Installed capacity and capacity under construction by type, at end-December 2011

<i>in MW</i>	<b>Gross</b>		<b>Net</b>	
	<b>at 31/12/2010</b>	<b>at 31/12/2011</b>	<b>at 31/12/2010</b>	<b>at 31/12/2011</b>
Wind	2,923	3,521.5	2,246.7	2,789.5
Solar	267.1	413.5	233.2	340.6
Hydro	131.4	84.2	102.9	77.1
Biogas	56.0	60.3	55.5	59.5
Biomass	26.0	26	18.2	18.2
Cogeneration	19.2	19.2	6.7	6.7
<b>Total installed capacity</b>	<b>3,422.7</b>	<b>4,124.7</b>	<b>2,663.2</b>	<b>3,291.6</b>
Wind under construction	918.0	1,490.1	564.1	892.2
Solar under construction	162.6	287.1	101.3	153.5
Other under construction	8.5	4.3	6.7	3.2
<b>Total capacity under construction</b>	<b>1,089.1</b>	<b>1,781.5</b>	<b>672.1</b>	<b>1,048.9</b>
<b>Total</b>	<b>4,511.8</b>	<b>5,882.2</b>	<b>3,335.3</b>	<b>4,340.5</b>

# EDF Energies Nouvelles: an exceptional year for solar



- **Increase of 146 MWc in operating capacity on high level of commissioning:**
  - France: completion of Gabardan in the Landes region (67.5 MWc), Bouloc (10.2 MWc), Saint-Symphorien T2 (12 MWc)
  - Italy: Augusta (6.7 MWc), Ancona (3.3 MWc), Citerna (3 MWc) and 21 plants between 0.5 and 1.55 MWc
  - Canada: Saint-Isidore B (11.8 MWc)
  - Spain: Zarza (7.5 MWc)
- **Signature of a PPA for the major plant in Catalina, California (130-145 MWc)**

- **287 MWc under construction**
- **Large-scale projects in France**
  - Toul (max. 135 MWc) (Meurthe et Moselle)
  - Massangis (56 MWc) (Yonne)
  - Crucey (60 MWc) (Eure-et-Loir)

**701 MWc gross in operation or under construction at 31 December 2011**

# 2011 Annual Results



Post Fukushima - appendices

# The strengths of EDF's nuclear fleet

## ■ Average age of 26 years

- 44 GW commissioned between 1980 and 1990 out of a total installed capacity of 63 GW
- Technical standardisation and continuous improvement in safety
- EDF: architect-assembler, owner and operator of its plants

## ■ Strict regulatory framework in France: new safety assessments every ten years with the aim of strengthening the design of its plants

- A new safety guide and corresponding improvement programme implemented during 10-year evaluations for each technical step, after receiving approval from the ASN
- Systematic re-evaluation of safety standards building on national and international experience as well as scientific and technical developments

## ■ Investment programme for replacing large components after 30 years of operation (2010-2020)

- Obsolescence of some large components that must be replaced after approximately 30 years of operation (international benchmark)
- With a view to operating facilities for 60 years

## ■ Extending operations beyond 40 years

- Target consistent with trends observed around the globe for similar technologies (PWR)
- EDF proposes a re-evaluation of specific safety standards to the ASN for implementation during the 4th 10-year visit for 900 MW plants and after the 3rd 10-year visit for 1300 MW plants



# Post-Fukushima in France

## Complementary safety assessments

- **ASN's decision on 5 May 2011, additional safety assessments on:**
  - Safety margins for facing natural disasters (earthquakes and floods) and their consequences (loss of electricity supply and cooling capacity)
  - Managing accidents resulting from these natural disasters
  - Including reactors and fuel storage pools
- **Evaluations focused on three factors:**
  - Factors reflected in the design of facilities, and compliance with facility design requirements
  - Assessment of “robustness” (available design margins, redundancy, etc.) of facilities beyond stress they are designed for
  - Modification options likely to further enhance current safety of facilities



# Post-Fukushima in France

## Timetable:

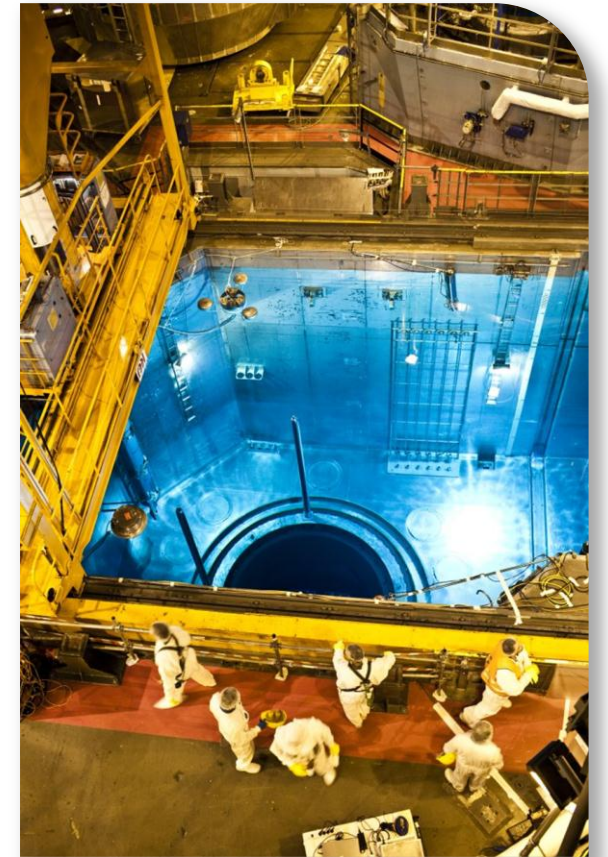
- 1 June 2011: methodology report submitted to the ASN
- 15 September 2011: EDF submits reports on 19 nuclear plants (including Flamanville 3) to the ASN
- 8, 9 and 10 November: Permanent Group of experts requested to meet with ASN
- 3 January 2012: ASN gives recommendation to the Prime minister, who will pass it on to the European Commission
- 30 June 2012: EDF submits proposals for material and organisational safety measures in response to extreme situations to the ASN
- From January to June 2012: reports from all European countries submitted to peer review process
- 25 April 2012: European Nuclear Safety Regulators Group examines and approves report on findings of European peer reviews
- 28-29 June 2012: European Commission presents its report on stress tests to the European Council
- 15 September 2012: reports submitted to the ASN regarding facilities that are not as high a priority



# Post-Fukushima in France

## The ASN's findings

- Nuclear facilities have a sufficient level of safety in current state
  - The current seismic margins of EDF's nuclear reactors are sufficient
  - The overhaul following the flood at the Blayais nuclear plant in 1999 provide nuclear plants with a high level of protection against flood risk
  - The reinforced design of the EPR already safeguards against serious accidents
- Operators have been asked to step up facilities' ability to withstand extreme situations, beyond their current safety margins



The ASN deemed that “safety at the facilities was good enough not to require that they be immediately shut down”

# Post-Fukushima in France

## EDF's implementation of ASN requirements

- Reinforcing current protection of facilities and certain materials against earthquakes and floods
- Additional technical measures to protect against extreme weather events:
  - Identifying a list of equipment (i.e. "the core") enabling to guarantee the availability of a back-up water and electricity supply for each reactor and reinforced protection against external events (presentation to the ASN before 30 June 2012)
  - Reinforcement of back-up water and electricity supplies (e.g. adding a last-resort emergency diesel generator for each reactor)
- Organisational measures:
  - Reinforcing the local and national emergency response organisation if both electricity and cooling capacities are lost at one site, i.e. fuel in the reactor or storage pools is damaged
  - Creation of an Emergency Intervention Task Force, fully operational at any site within 24 hours



# Additional measures, including some that are already envisioned in our medium-to long-term guidance

## Safety improvements already accounted for in the extension of the operational lifespan of plants, including:

- Additional resources for electricity and water supplies
- Emergency power removal systems in the event of multiple failures
- Improving filtration of radioactive materials in the event of a serious incident

## New improvements:

- Increasing protection of sites beyond their design specifications (earthquake, floods)
- “Core” materials that can withstand the severity of this type of earthquake or flood
- Additional crisis resources in the event all reactors at one site are affected:
  - Local resources (crisis centre)
  - National resources (Emergency Intervention Task Force or FARN)

Already planned



New

approx. €10bn total<sup>(1)</sup>

# 10-year investment programme, timetable yet to be finalised

- A vision as of today
  - Deployment planned over a period of 10 years; its feasibility will depend on industrial capacities
  - Estimate of around 5-10 years on average (depending on type of reactors) for safety improvements already included in the plant lifespan extensions
- that will depend on future developments:
  - 1st quarter 2012: ASN technical requirements and completion deadlines
  - European peer reviews in the first half of 2012

# Post-Fukushima in the UK

## Timeline of stress tests

- Information sent to the ONR<sup>(1)</sup> by EDF Energy between 15 April and 31 July 2011
  - ONR's interim report published on 18 May 2011, containing 26 recommendations
  - ONR's final report published on 11 October 2011, containing 12 new recommendations
- EDF Energy submits 8 additional safety reports to the ONR on 31 October 2011
  - The ONR releases its National Report on 4 January 2012 containing 19 observations
  - Some recommendations include observations already issued in the interim and final reports
- The ONR concluded that:

"Neither the reviews undertaken by the Licensees for the stress tests, nor the earlier national reviews has indicated any fundamental weaknesses in the definition of design basis events or the safety systems related to the stress tests to withstand them for UK NPPs"



# Post-Fukushima in the UK

## Conclusions of the stress tests:

- For the entire fleet
  - Preparations for emergency plans will be stepped up to reflect a better understanding of the evolution of serious accidents and the availability of emergency equipment
- Sizewell B
  - Capacity to withstand a serious accident could be improved by installing passive hydrogen recombiners and by improving capacity to ventilate the containment building through filters used for serious accidents
  - Technical research on filtering is underway, in line with technical work being carried out in France
  - An emergency and rescue command centre near the site, which would be used for storing the rescue equipment and aiding the site in the event the main systems no longer function
- For the AGR reactors
  - Slower response times of AGR reactors require a different solution
  - Limited number of forthcoming modifications for flood protection
  - Focus on large range of equipment and safeguard buildings kept off site



## Extending operations of UK plants

Nuclear plants	Launch date	Initial closing date	Extensions obtained	Provisional closing date	Accounting lifespan after extension
Hinkley Point B	Feb 1976	2001	15 years	2016	40 years
Hunterston B	Feb 1976	2001	15 years	2016	40 years
Dungeness B	Apr 1983	2008	10 years	2018	35 years
Heysham 1	Jul 1983	2008	10 years	2019	35 years
Hartlepool	Aug 1983	2008	10 years	2019	35 years
Torness	May 1988	2013	10 years	2023	35 years
Heysham 2	Jul 1988	2013	10 years	2023	35 years
Sizewell B	Feb 1995	2035	-	2035	40 years



AGR<sup>(1)</sup>'s average lifetime extensions increased from 5 to 7 years

## Post-Fukushima in the US

- Since the Japanese accident in March 2011, the NRC has re-affirmed the safety of reactors in operation in the US
- It has rejected the possibility of a shutdown while there is no new risk
- US reactors have displayed capacity to withstand earthquakes and other external events for which pre-existing measures have been reinforced, including:
  - Significant reinforcement in the 1990s, in the wake of the Individual Plant Examination for External Events
  - Extra lines of defence added post-September 11th



# Post-Fukushima reactions in the US

- Since the accident in Japan in March 2011, the NRC (Nuclear Regulatory Commission) has re-affirmed the safety of reactors being operated in the US

## SHORT TERM

- Re-evaluating seismic and flood risks
  - New crisis-response systems in the event of an electricity outage
  - Adding mobile equipment to the sites
  - Reinforcing "venting" lines for boiling-water reactors
  - Improving instruments at spent-fuel pools
  - Bolstering communication tools for crisis response teams
  - Improving management procedures for serious accidents
- New regulatory constraints in the wake of Fukushima (to be set in March 2012), which the NRC expects to be implemented by 2016

## LONGER TERM

- Reinforcement of temporary capacity for spent-fuel pools
- "Venting" capacities for pressurised water reactors
- Increase in filtration capacity of the "venting" lines of boiling- or pressurised-water reactors
- Increased control of hydrogen risk
- Control of situations in which cold water source is cut off



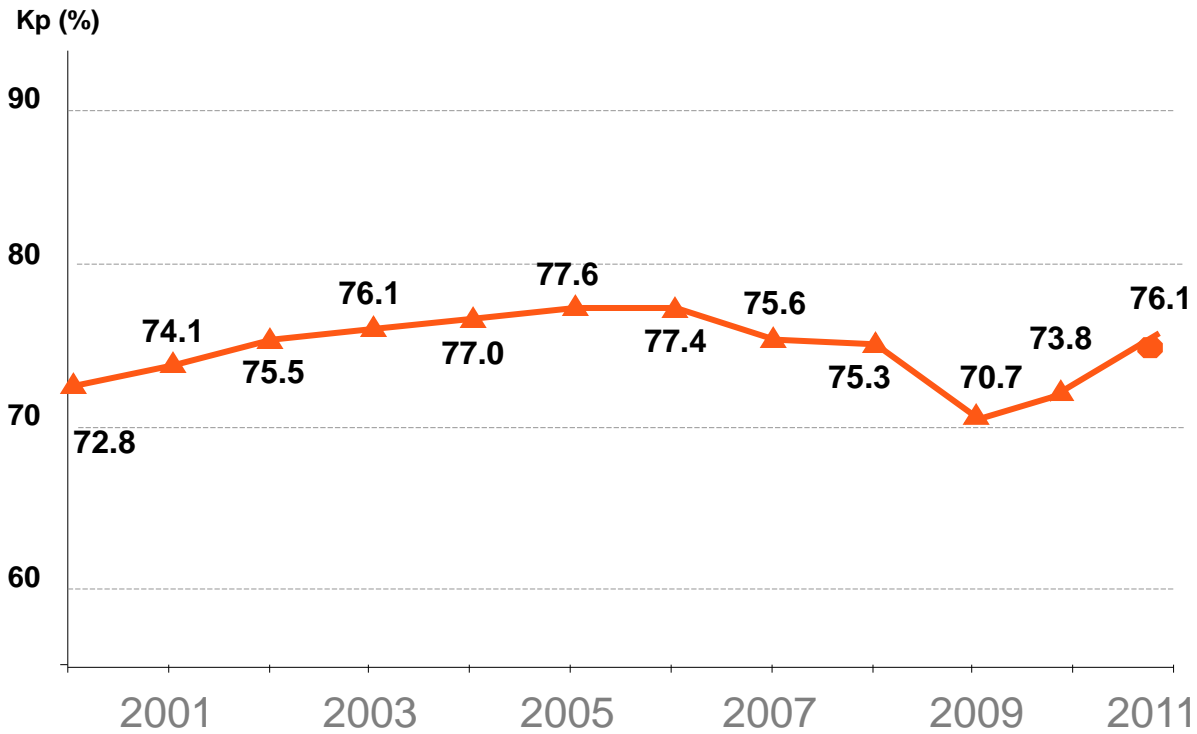
# 2011 Annual Results



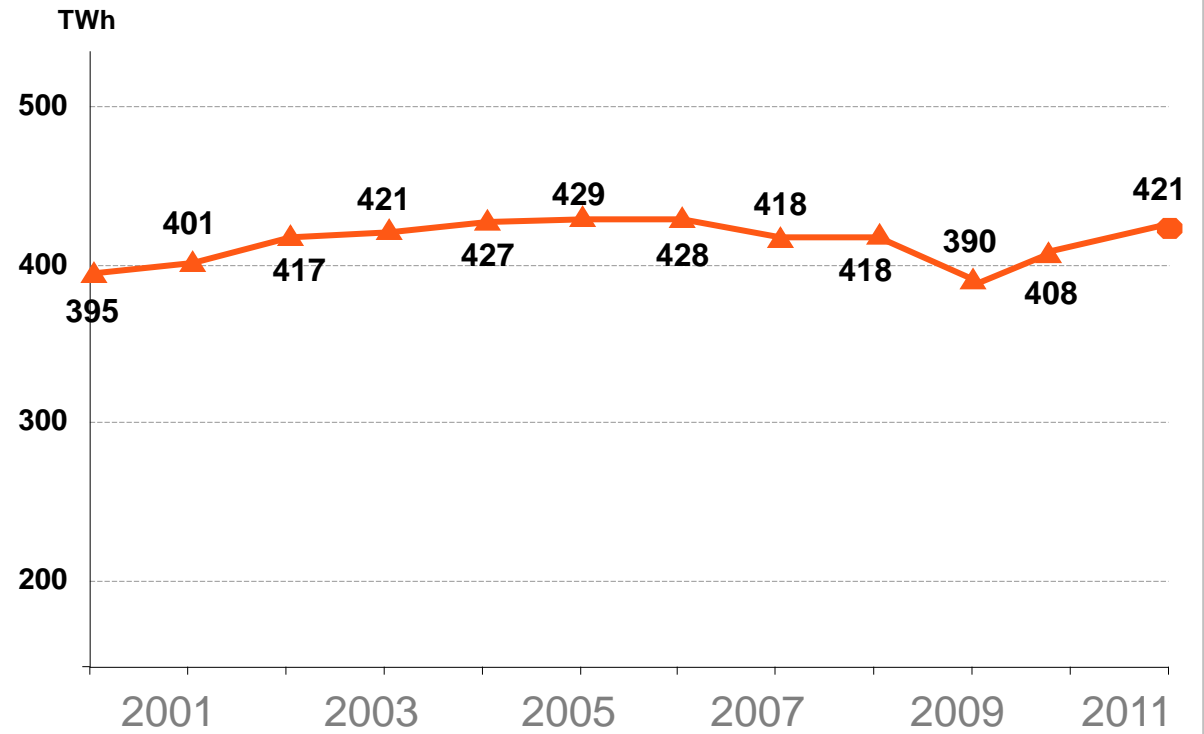
France appendices - Power Generation

# Change in load factor and nuclear output

Annual Kp (load factor) of nuclear fleet

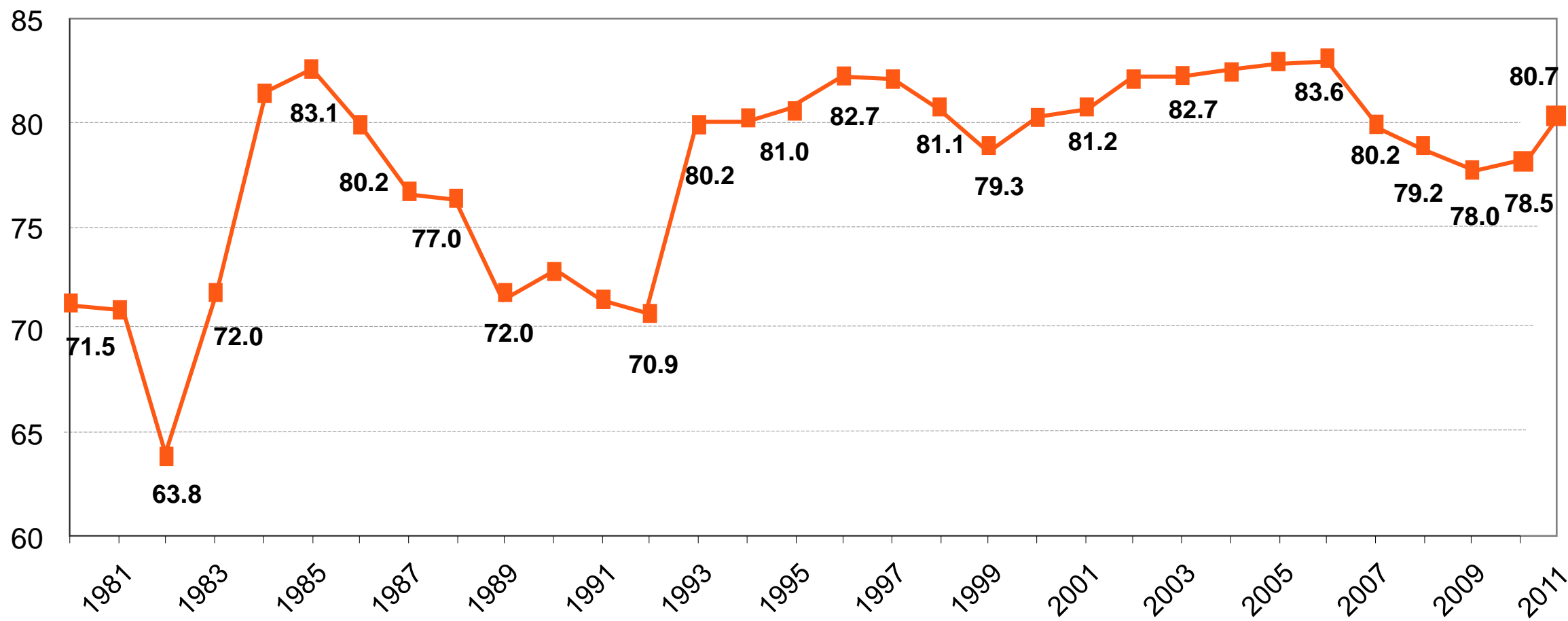


Net output of PWR fleet

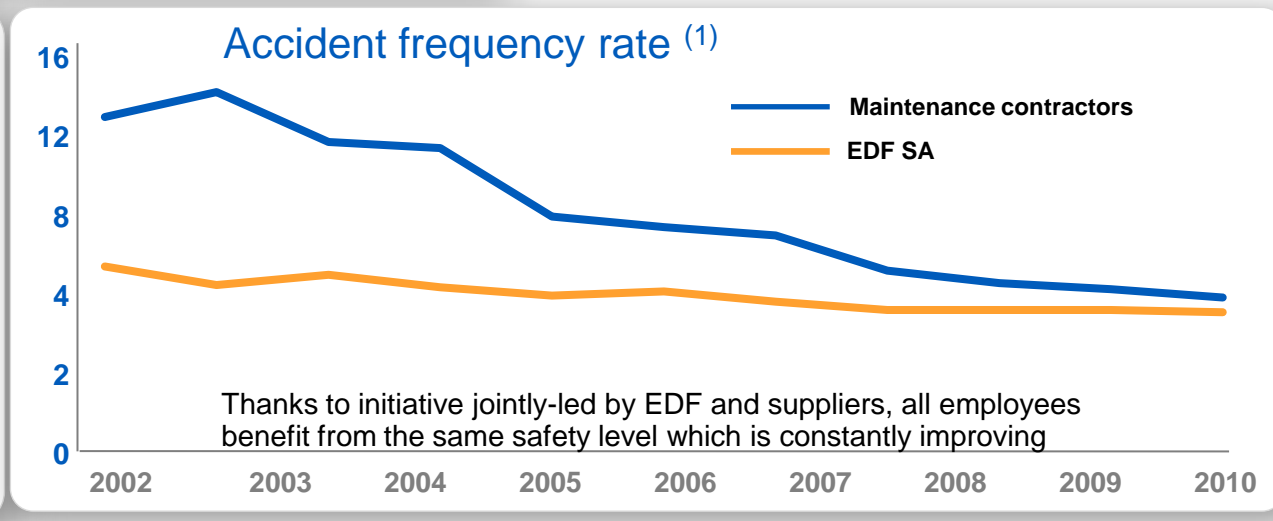
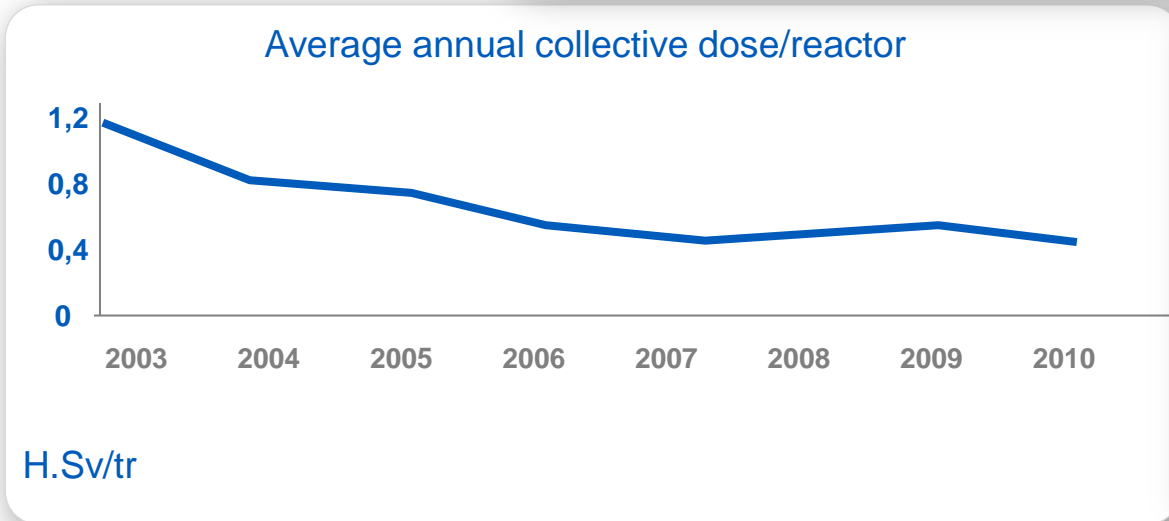
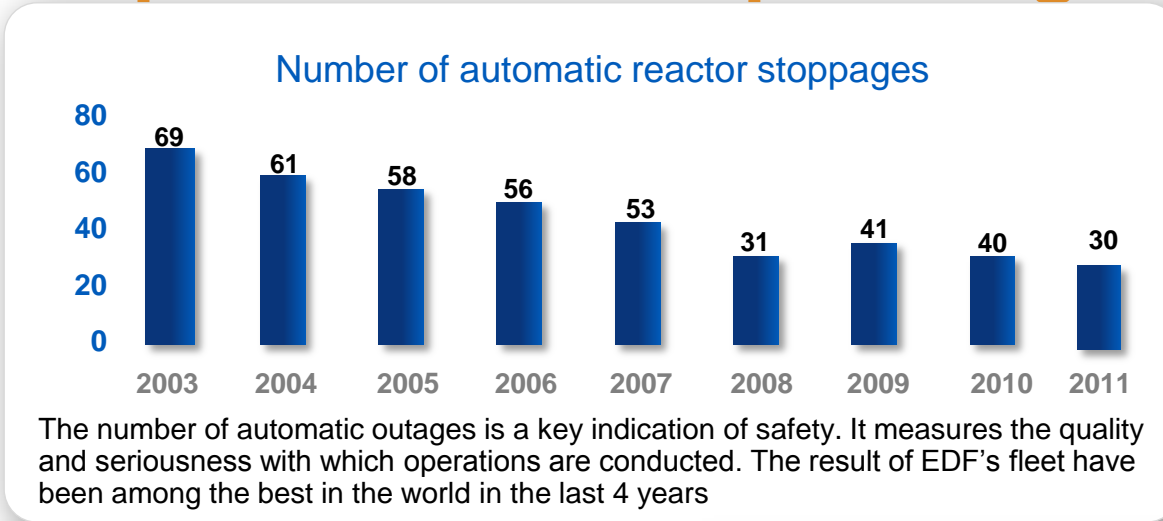


# Availability of nuclear fleet since 1980

Kd (%)



# Continuous improvement in operating conditions



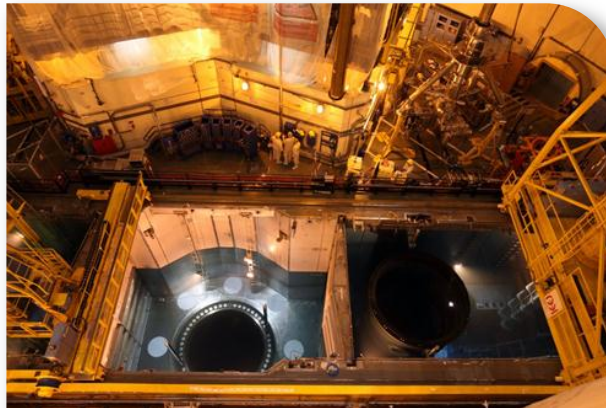
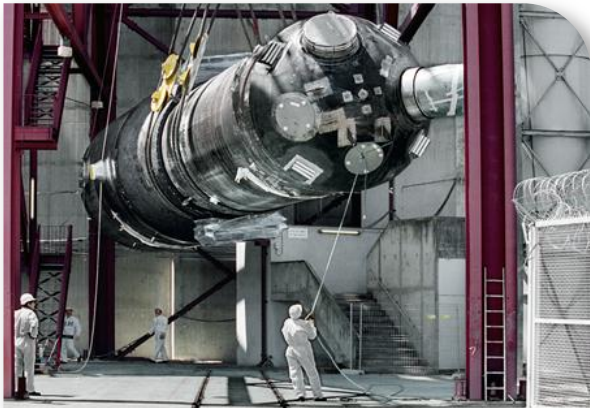
## Operating performance: the levers

- Pursuing replacement of large components (steam generators, alternators' stators, main transformers)
- Reinforcing industrial management of tranche outages to reduce outage extensions
- Improving the reliability of equipment through preventative maintenance to reduce unavailability



# Replacement of large components and COPAT to continue

	Replaced at end 2011	Priority replacements
<b>Steam generators (3 SG/900MW reactor)</b>	Twenty-one 900 MW-reactors	6 priority reactors by 2014 of which 2 in 2012
<b>Alternator stators</b>	27 reactors	21 reactors between until 2017 of which 4 in 2012
<b>Main transformers (3 units / reactor)</b>	Programme ramped up starting in 2012: 4 reactors/year on average until 2020	



## Reinforcement of industrial control of tranche outages

- Continuous management of critical outage operations and quick response to alarms for securing the length of the outage
  - COPAT alerted within 30 minutes
  - Maintenance teams quickly put in place and creation of identified teams to integrate feedback
  - Process for managing major unexpected events

2010

2011

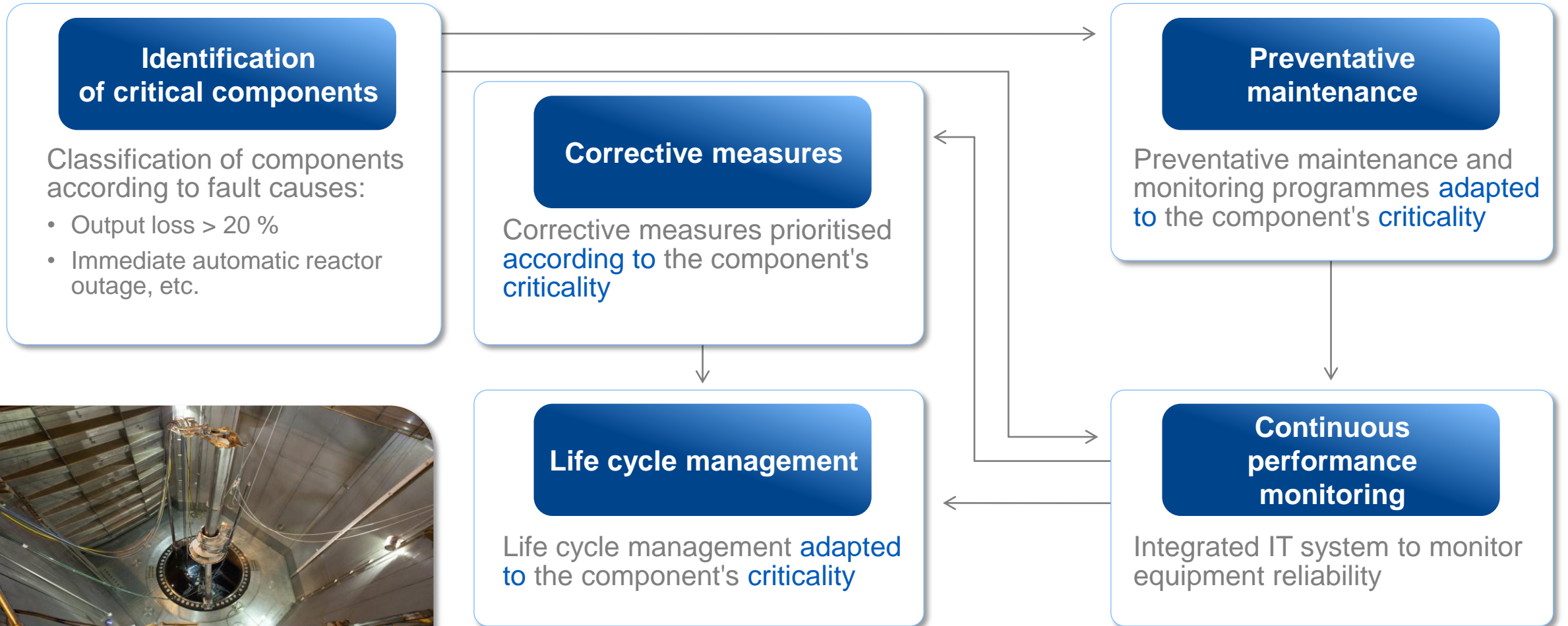
Number of outages carried out with a « *Centre opérationnel de pilotage des arrêts de tranche* » (COPAT)

20 out of 44 outages

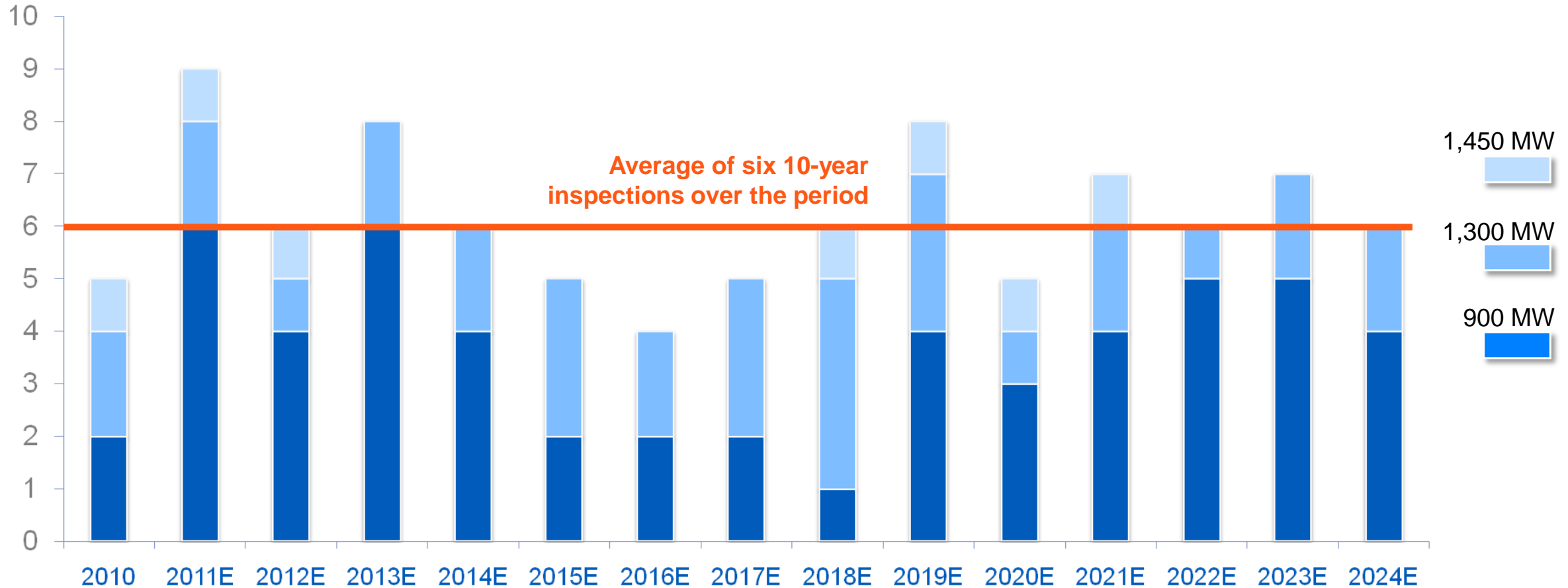
30 out of 50 outages

Starting in 2013, all scheduled outages will be conducted alongside a COPAT.  
The full impact of these measures is expected in 2014

# Reducing the unplanned unavailability rate: the AP 913 approach



# Average of six 10-year inspections per year



One 10-year inspection = about 100 outage days

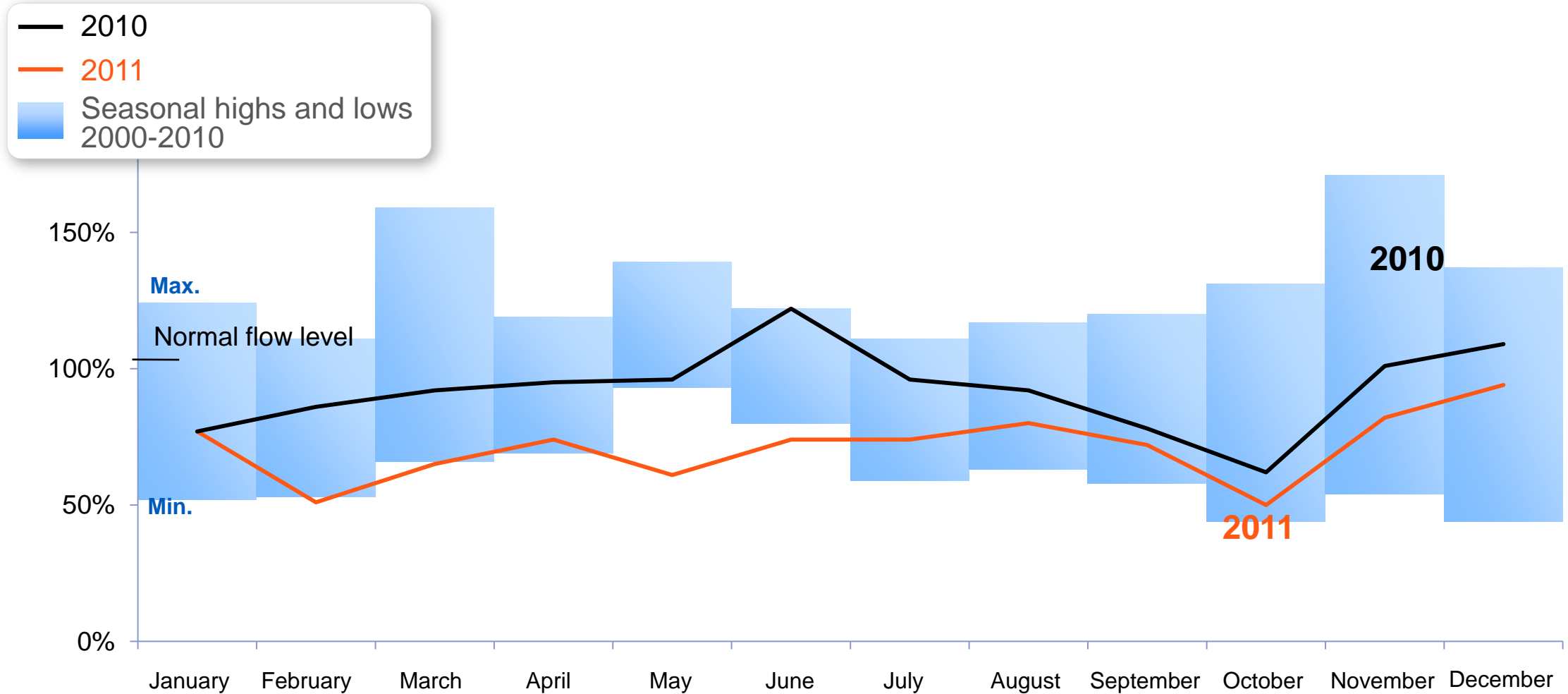


## Hydropower: 2011 highlights

- Spring 2011: New concession in the town of Kembs commissioned by French and Swiss governments. Increase in the water flow to satisfy needs of flora and fauna; construction of a new 8.4-MW plant
- May 2011: Two 5-year approvals for EDF to reinforce the safety of hydropower facilities obtained from the Ministry of Ecology, Sustainable Development, Transport and Housing. These two approvals are genuine recognition of EDF's hydropower competency with regard to the construction safety
- 6 October 2011: Government approves EDF's proposed reconfiguration of the dam in Poutès (Allier). The current 17-meter high dam will be modified, becoming a 4-meter high structure equipped with a spillway enabling better fish migration. Cost of works: approx. €11 million
- October-January 2012: Preliminary tests of the marine current turbine project under real conditions off the coast of Paimpol-Bréhat



# Poor hydropower conditions in France in 2011

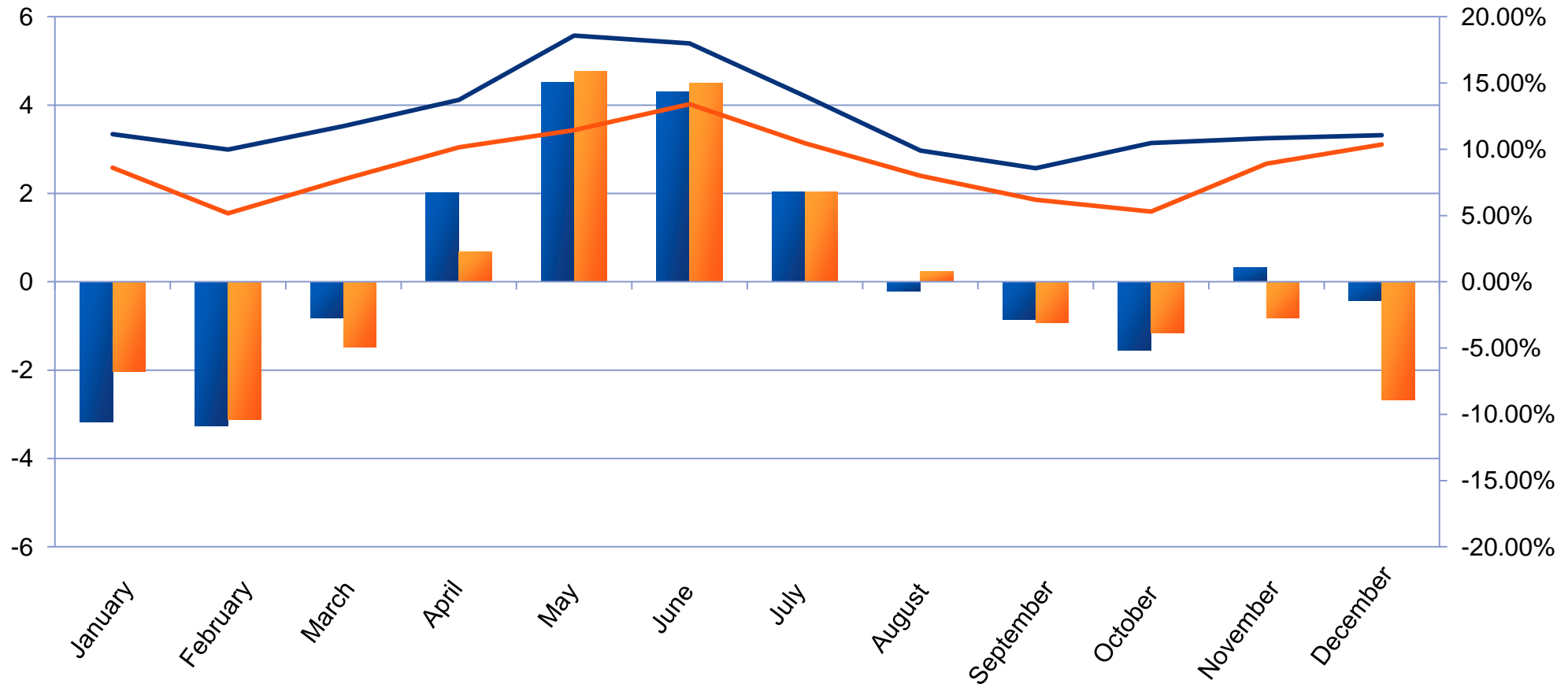


# Variable monthly hydropower and energy reserve fluctuation (2011 vs. historic average)

In TWh

- 2011 fluctuation of energy reserves
- Average fluctuation of energy reserves (1986-2011)
- Average output potential
- 2011 output potential

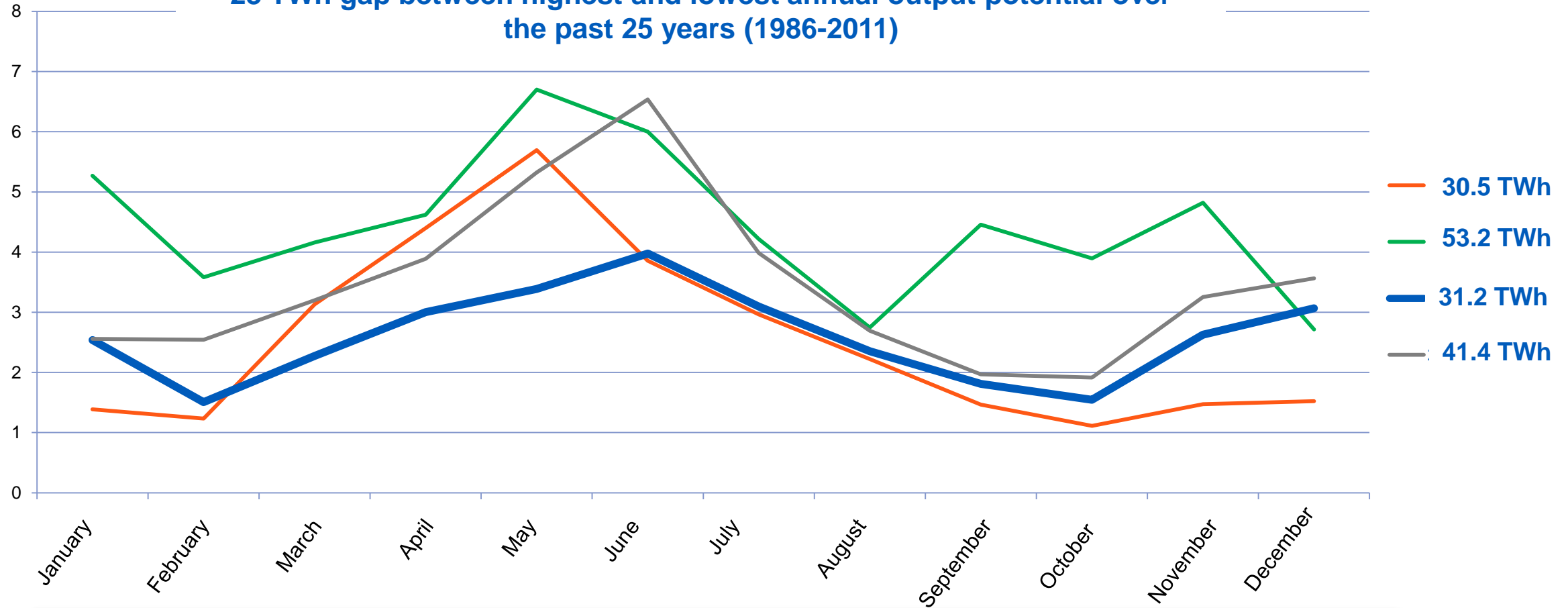
Fluctuation in pts vs. reservoir levels (% full)



# Potential hydropower generation depends on weather

In TWh

23 TWh gap between highest and lowest annual output potential over the past 25 years (1986-2011)



**Maximum potential hydropower capacity** : maximum quality of power that can be produced from hydraulic sources (rain, snow, tides) over a given period of time

## Investments in hydropower assets

**“SuPerHydro”, a programme for improving the safety and performance of hydropower facilities:**

- Large-scale programme “technical enhancements”, focusing on hydro-mechanic equipment (valves, forced tubing...)
  - €560 million over the period 2007-2011
  - 367 safety-related and 80 performance-related measures
- Projects completed in 2011:
  - Nentilla-Escouloubre (Pyrenees): replacement of 400 meters of forced tubing (to be continued in 2012)
  - “Line stoppage” at Curbans site in Sisteron (Durance): resealing and drainage of the Curbans canal, repair of Sisteron canal, work done on the Curbans plant, etc.



# Investments in hydropower assets

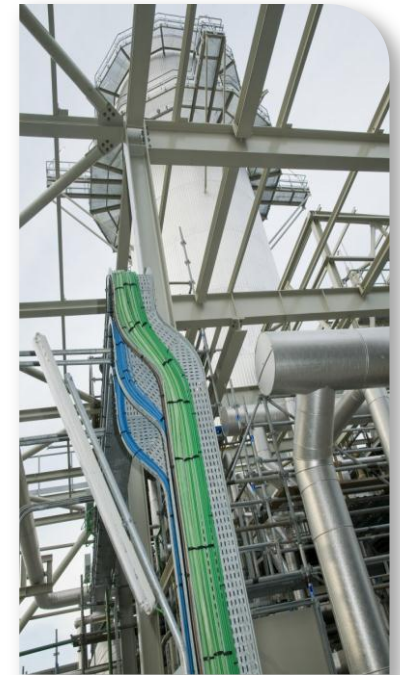
## The Renewal project for modernising operations and maintenance

- Gradual deployment across all units from 2012 to 2018
- Features of the project:
  - Overseeing facilities and remote intervention via e-operations, modernising the control-command systems
  - Substituting conditional and preventative maintenance to repair
  - Optimising maintenance outages
  - Modernising the information system by shifting to computer-aided maintenance
  - Simplifying management of small hydropower structures
- Gains expected in:
  - Increasing output potential
  - Making temporary power available at peak times
  - Making additional system services available

**2015 gains estimated > €90m**

## EDF's fossil-fired fleet: 2011 highlights

- April: Decision to extend operations of 3,600MW, coal-fired tranches (Le Havre 4, Cordemais 4 and 5). €480m in investments for replacing and renovating strategic components
- June: combustion turbine in Gennevilliers (203MW) restarts
- October: gas-fired combined cycle plant in Blénod (430MW) comes on line
- December:
  - Investment decision for building a supercritical coal-fired plant (900MW) in Rybnik, Poland. approx. €1.8bn - commissioning expected in 2018
  - Partnership inked with GE Energy for co-developing next generation of gas-fired combined cycle plant (510 MW), to be built on the Bouchain site. Commissioning expected in 2015



# 2011 Annual Results



Appendices - French regulation

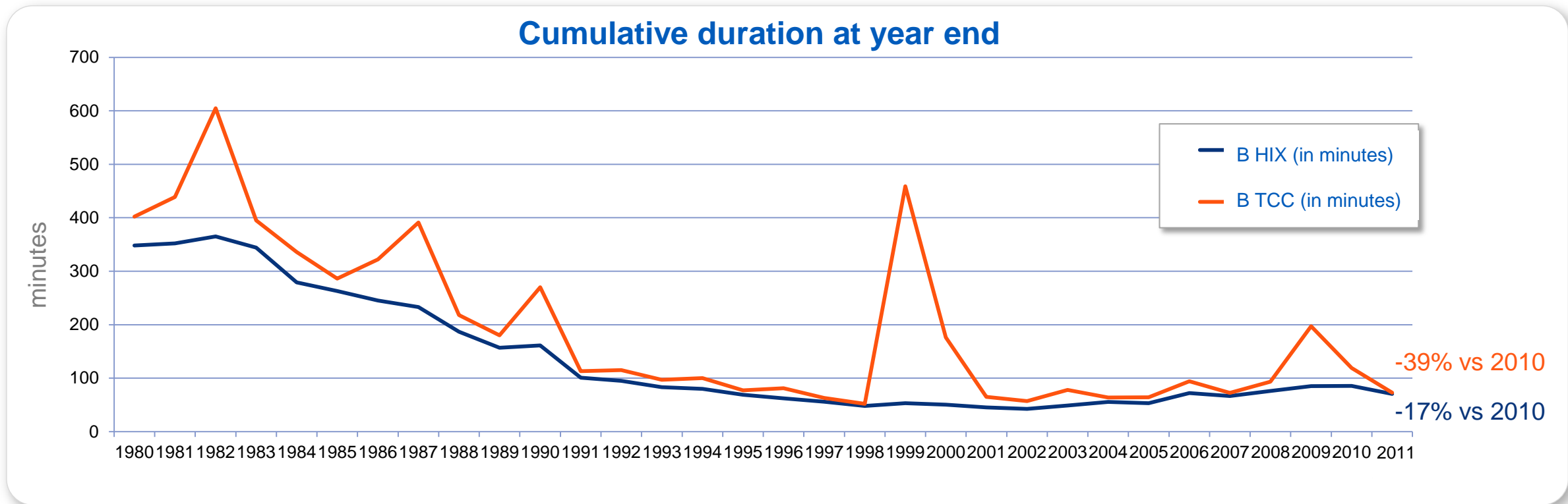
# Key figures: ERDF

*In millions of euros*

	2009	2010	2011	Δ%
<b>Sales</b>	11,374	12,182	12,254	0.6%
<b>EBITDA</b>	2,159	2,475	2,795	13.0%
<b>Recurring net income</b>	(77)	115	440	x4
<b>Operating Capex<sup>(1)</sup> in € billion</b>	2,313	2,560	2,821	
<b>Regulated asset base in € billion</b>	30.5	32.2	34.0	

# ERDF: improving offer quality in France

- Criteria excluding exceptional events and RTE (B HIX) and criteria all causes considered including RTE (B TCC)



Overall drop in interruption time due to the reinforcement of network and replacement of cables in urban areas

## ERDF – 5 years review of facilities lifespan and detailed management of assets

- Revision of estimates for the lifespan of low-voltage twisted aerial tubes
  - Increase from 40 to 50 years after statistical and technical studies, leading to a new estimate of their lifespans
  - No correlation between the age of the twisted aerial network and the observed failure rate

**Next step:**  
applying this experience to other facility categories



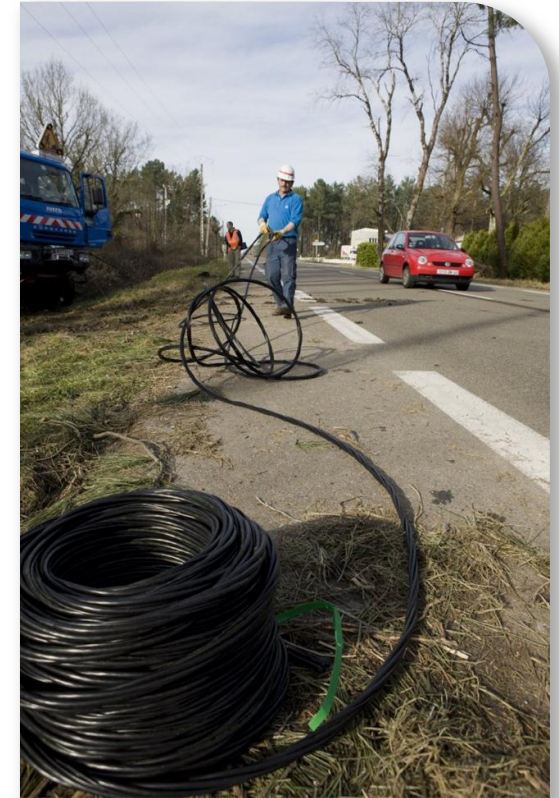
## ERDF - Financial impact of operating extensions

- Mechanical reversal of renewal provision set up for facilities currently being depreciated, whose operating lifespan can now be extended beyond term of concessions (see Art. 36 of the 2004 law)

€414m booked in non-recurring income

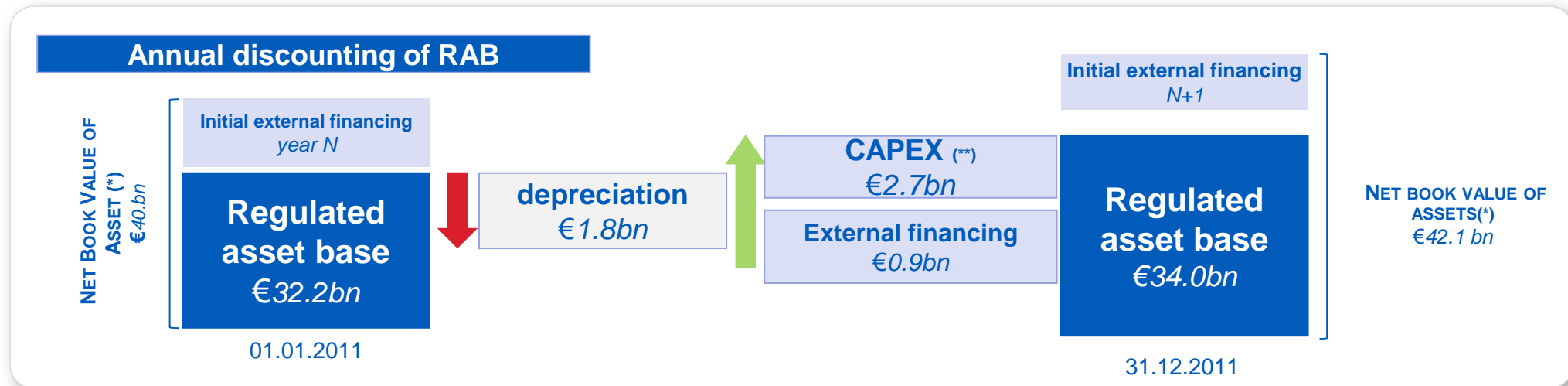
- Fewer (prospective) allocations for depreciation/amortisation and provisions for renewal

€25m and €33m in 2011, respectively



# Change in ERDF's Regulated Asset Base (RAB)

- Regulated asset base fluctuates depending on:
  - industrial depreciation of fixed assets, which lowers value of RAB
  - ERDF investments (CAPEX) and assets granted to concession grantors and third parties (external financing)



(\*) Excluding current fixed assets

(\*\*) Net of outflows

- The change in 2011 is part of the current investment scenario, financed by TURPE 3, and which will allow ERDF to implement its quality targeted turnaround programme

# Regulation and asset bases in France

## Electricity

	2011RAB (€bn)	WACC	Indexing
Transport	Net book value = €11.4bn	7.25% nominal before taxes	CPI+0,4%+CRCP 2.56% at 1 <sup>st</sup> August 2011
Distribution	Net book value = €34.0bn	7.25% nominal before taxes	CPI+1,3%+CRCP 3.94% at 1 <sup>st</sup> August 2011



## ERDF – Linky

### Creation of a remote metering system: replacement of 35 million meters in France

- A successful experiment with almost 300,000 meters
  - CRE (French Energy Commission) proposes that Linky be rolled out nationally (meeting in July 2011)
- What comes next?
  - Determination of financing terms
- Benefits expected
  - Improvement in customer service
    - remote operations, real-time billing, information, faster repairs
  - A key link in the networks of the future
    - smart grids: integration of renewable output, electrical vehicles, .
  - Improvement in Group performance (lower management costs, fewer on-site visits, reduction in non-technical losses)



an investment of about: €4bn<sub>2010</sub>

# 2011 Annual Results

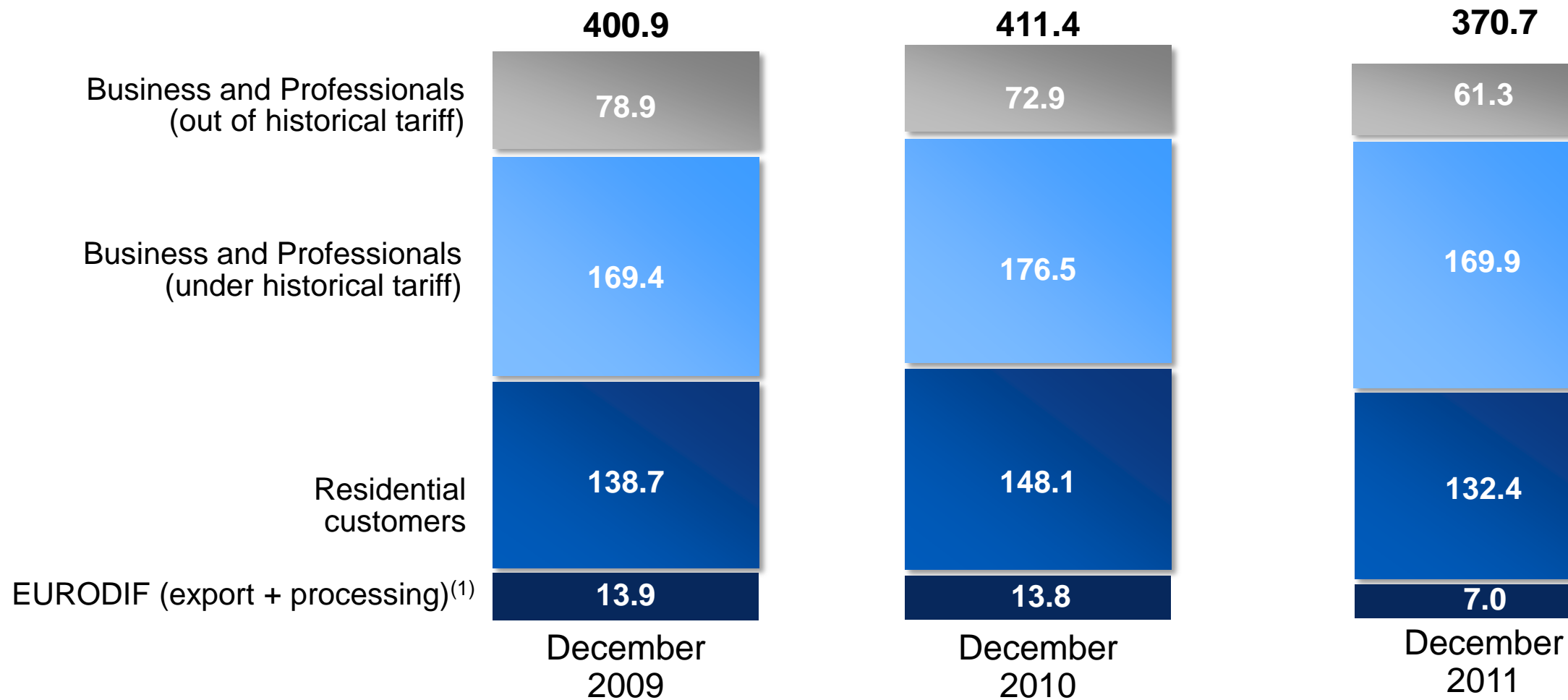


Appendices - Supply

# EDF's electricity business in France

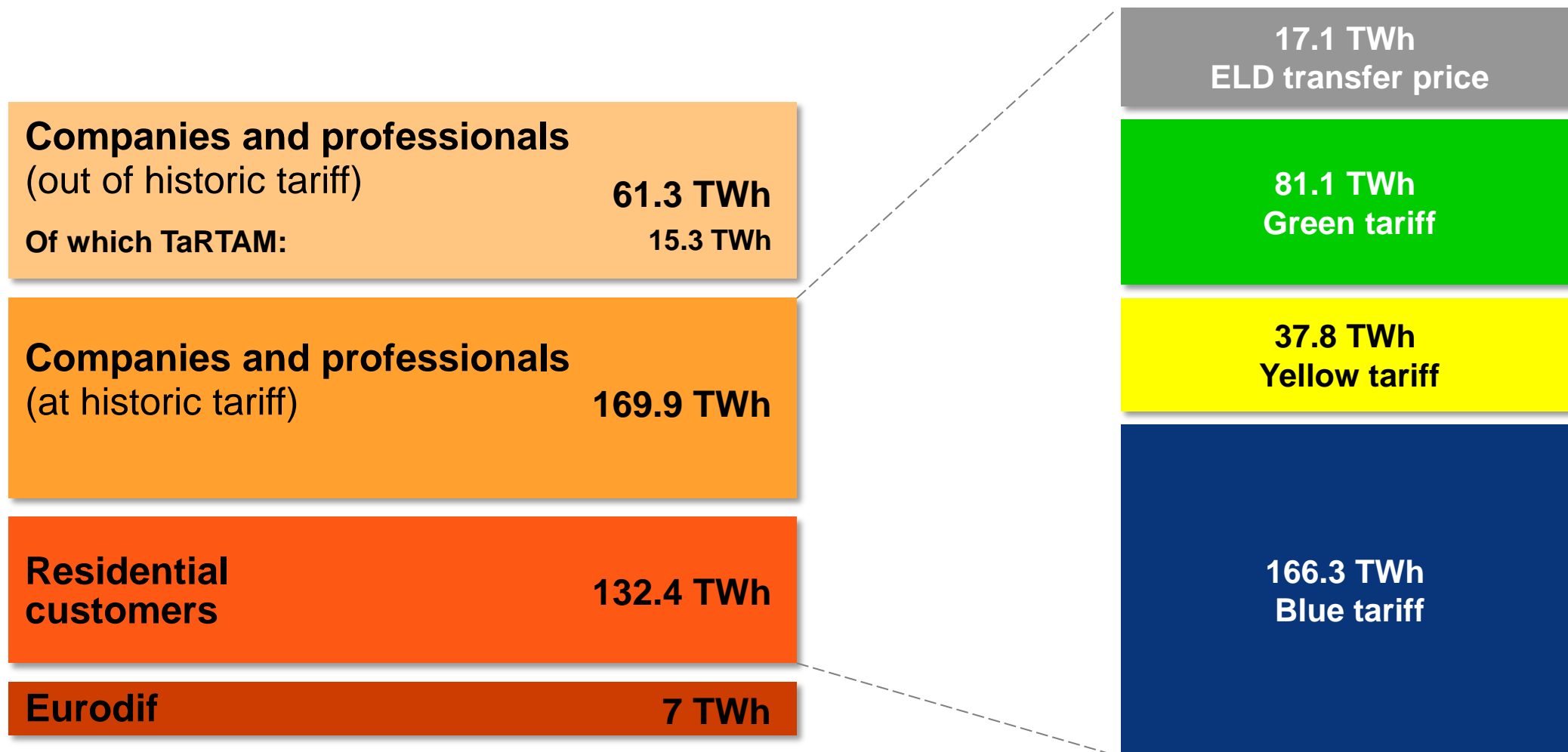
## Sales to end-customers

TWh



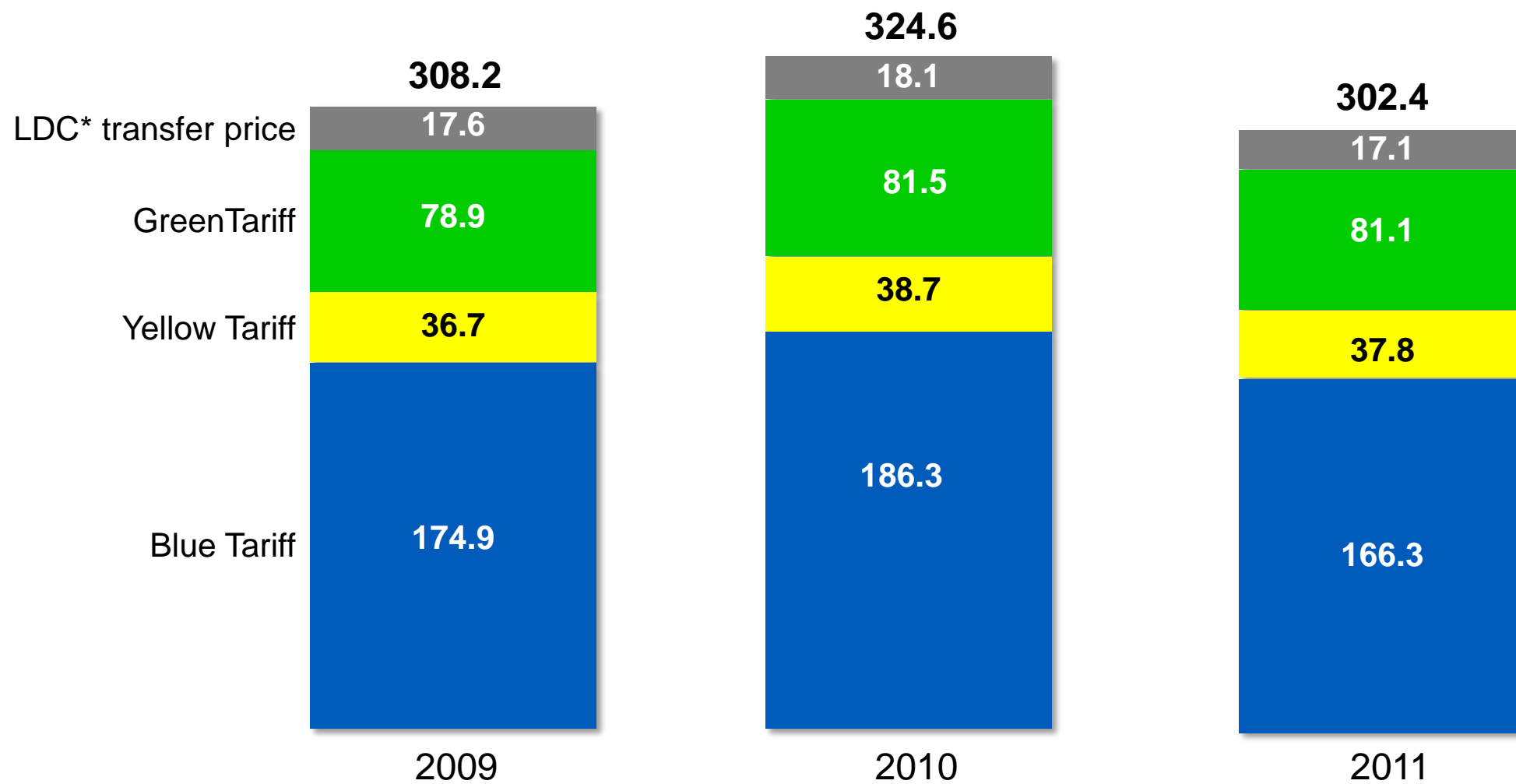
# EDF's 2011 electricity business in France

## 2011 end customers sales

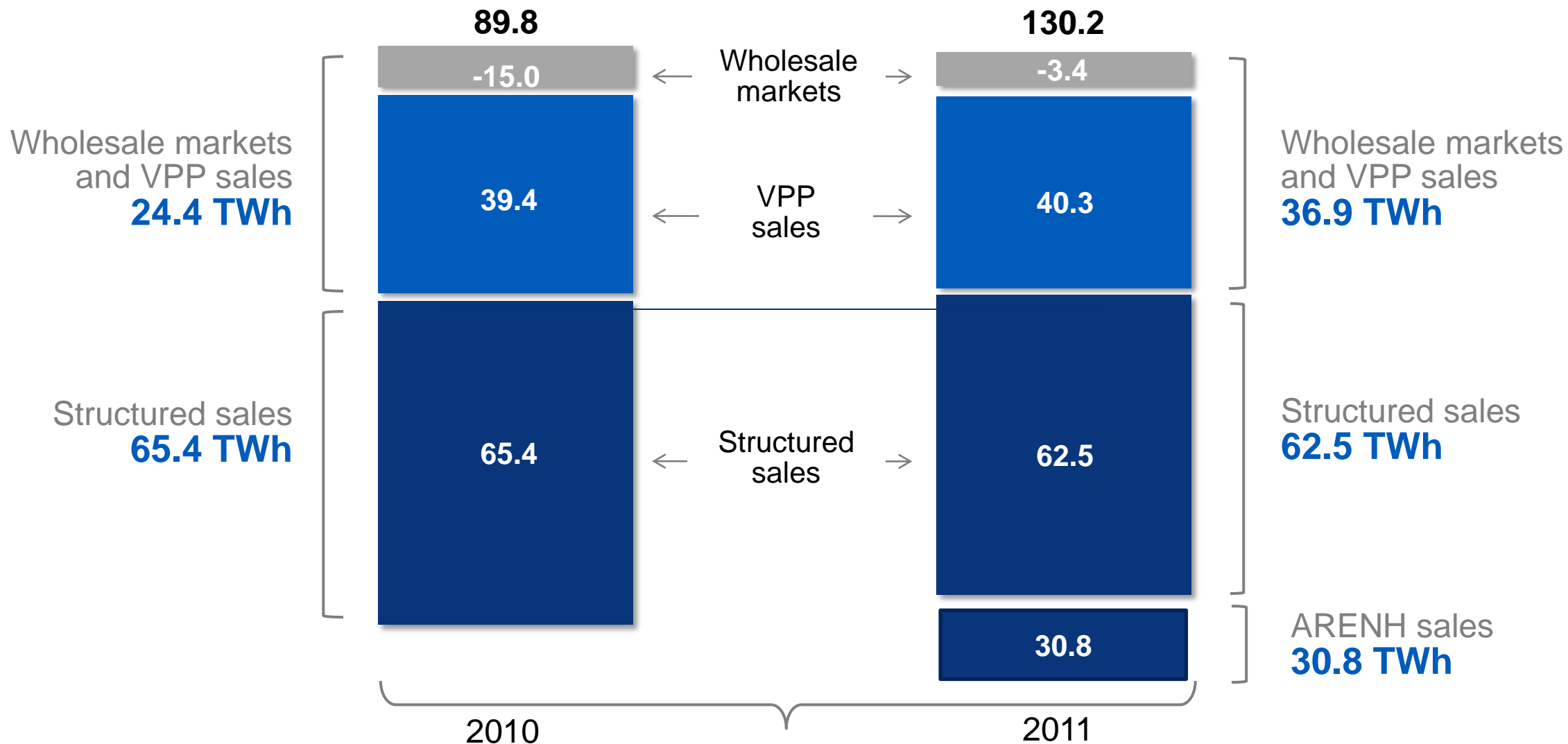


# EDF's electricity business in France

TWh **Sales under historic tariff**



# EDF's downstream portfolio



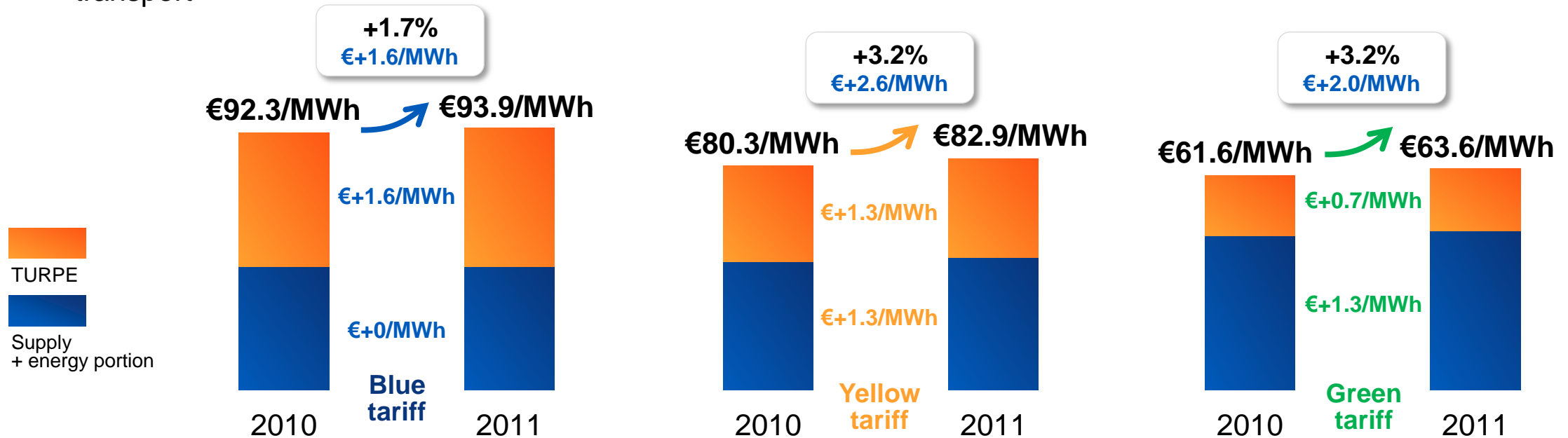
Downstream portfolio managed by optimisation business unit  
(via EDF Trading for the wholesale market interface)

## Change in tariffs and inflation in France

	2005	2006	2007	2008	2009	2010	2011
Inflation ( <i>July N / July N-1</i> )	1.6%	2.0%	1.1%	3.6%	-0.7%	1.6%	2.1%*
Average	0%	1.7%	1.2%	3.6%	2.7%	3.8%	2.2%
<i>o/w:</i>							
Blue	0%	1.7%	1.1%	2.0%	1.9%	3.2%	1.7%
Yellow	0%	1.7%	1.5%	6.0%	4.0%	4.5%	3.2%
Green	0%	1.7%	1.5%	8.0%	5.0%	5.5%	3.2%
TaRTAM			1.5%	8.0%	0%	0.6%	-
Increase incl. TaRTAM			1.3%	4.1%	2.3%	3.4%	-
Non-nationalised distributors		0%	0%	0.8%	5.6%	10.0%	-

## French tariff increases in 2011

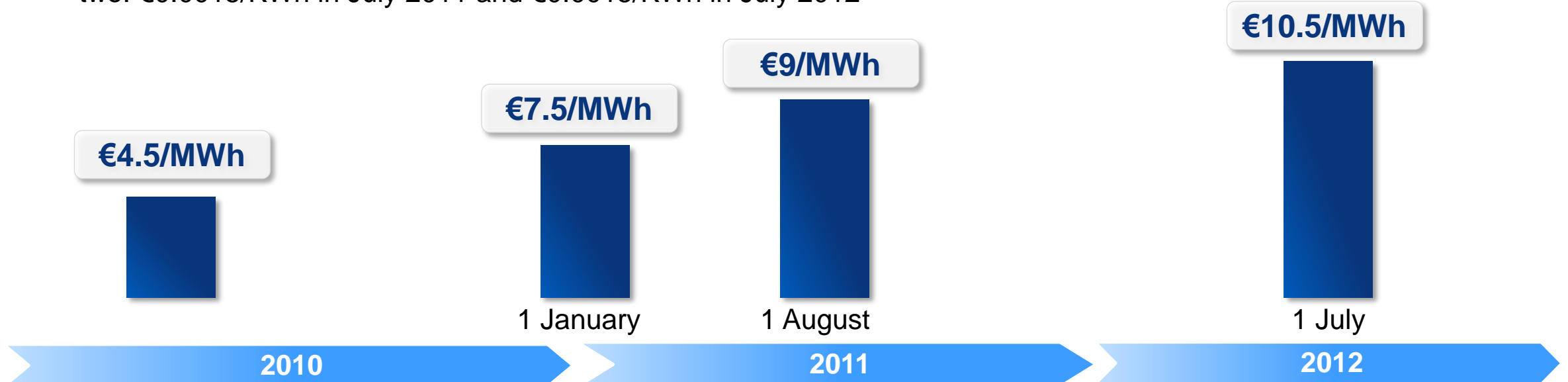
- Tariff increases are made once a year: in 2011, the following increases went into effect on 1 July
  - 1.7% for households and companies (blue tariff)
  - 3.2% for other professional clients (yellow and green tariffs)
  - These hikes include delivery increases (TURPE) effective 1 August 2011: 3.94% for distribution and 2.56% for transport



Stability from marketing + energy on individuals and small businesses and linked to the TURPE hike

# CSPE principles and increases

- CSPE (Contribution to electricity public service):
  - Charged to end users via an "other services" line on their energy bill
  - Collected by network operators and electricity suppliers
  - Periodically amended: "*Barring a decree setting the amount of the contribution due for a given year prior to 31 December of the previous year, the amount proposed by the Energy Regulation Commission (CRE) French regulator, in accordance with the preceding paragraph, enters into force on 1 January, within the limit however of an increase of €0.003/Kwh with respect to the amount applied before this date*". Increase of 1 January 2012 is splitting in two: €0.0015/KWh in July 2011 and €0.0015/KWh in July 2012



## Main CSPE components for EDF SA

- Set up pursuant to the Law of 10 February 2000 to allow EDF to offset certain expenses related to certain public service mandates

<i>In millions of euros</i>	<b>2011</b>		<b>2010</b>		<b>2009</b>	
Purchase obligations <sup>(1)</sup>	2,244	63%	1,599	61%	1,541	58%
Others <sup>(2)</sup>	1,312	37%	1,006	39%	1,123	42%
<b>Total CSPE</b>	<b>3,556</b>		<b>2,605</b>		<b>2,664</b>	

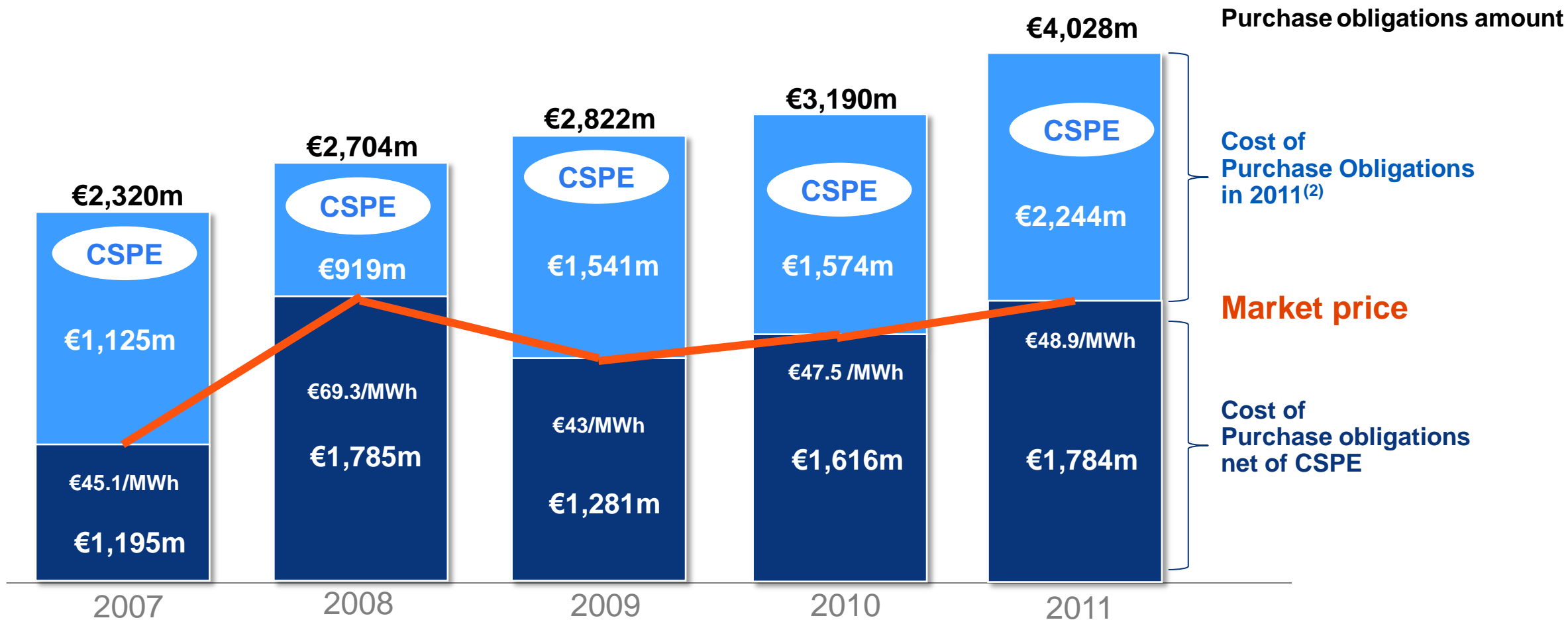
- In the overseas departments and Corsica, the CSPE varies with energy and fuel purchases and the cost of replacing old power plants
- The rise in the CSPE is linked to purchase obligations, which take into account the rapid expansion of wind and PV power and the decline in wholesale electricity prices

(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 Corsica and the overseas departments

(2) Additional production costs and purchase obligations in Corsica and the overseas departments, the TPN (First Necessity Tariff) and the FSL

# Change in purchase obligations in mainland France and CSPE for EDF SA

**Principle:** The CSPE<sup>(1)</sup> offsets the difference between the cost of purchase obligations and market prices



(1) CSPE also offsets generation costs and purchase obligations in Corsica and French overseas departments and first necessity tariff

(2) EDF SA excluding Island Electric Systems

# CSPE in the EDF Group financial statements at end December 2011

## ■ Income statement:

- Booked under "Other operating income and expenses<sup>(1)</sup>" for €3,556m (under an operating subsidy)
- On EBITDA, compensate over-costs electricity public service missions

## ■ Balance Sheet

- Recorded with working capital under "other receivables" for €3,821m for expenses incurred by EDF and not yet offset by the CSPE
- Increases net financial debt accordingly
- At end-2012, the estimated deficit in working capital should range between €4.4bn and €4.6bn

## ■ Cash Flow Statement

- Cash in: €2,547m
- Increase in working capital requirements: €1,009m

# Impact of the CSPE on EDF SA's financial statements

*in millions of euros*

	2009	2010	2011
<b>P&amp;L</b>			
Actual additional costs/lost income	(2,664)	(2,605)	(3,556)
Operating subsidy "Other operating income and expenses"	2,664	2,605	3,556
EBITDA	Neutral	Neutral	Neutral
<b>Balance sheet</b>			
Receivables (Expenses – CSPE billed) "Other debtors"	1,844	2,812	3,821
Debt (CSPE on energy delivered but not yet billed) ; "Other creditors"	(303)	(344)	(579)
<b>Cash flow</b>			
Income received	1,585	1,637	2,547
Increase in WCR (change in receivables)	1,079	968	1,009

The gap from the mechanism is borne by EDF and is determined on the basis of the energy delivered. It is booked as a receivable in Assets integrating the amount of CSPE billed to customers and a debt in Liabilities for the CSPE on energy delivered and the amount that remains to be charged.

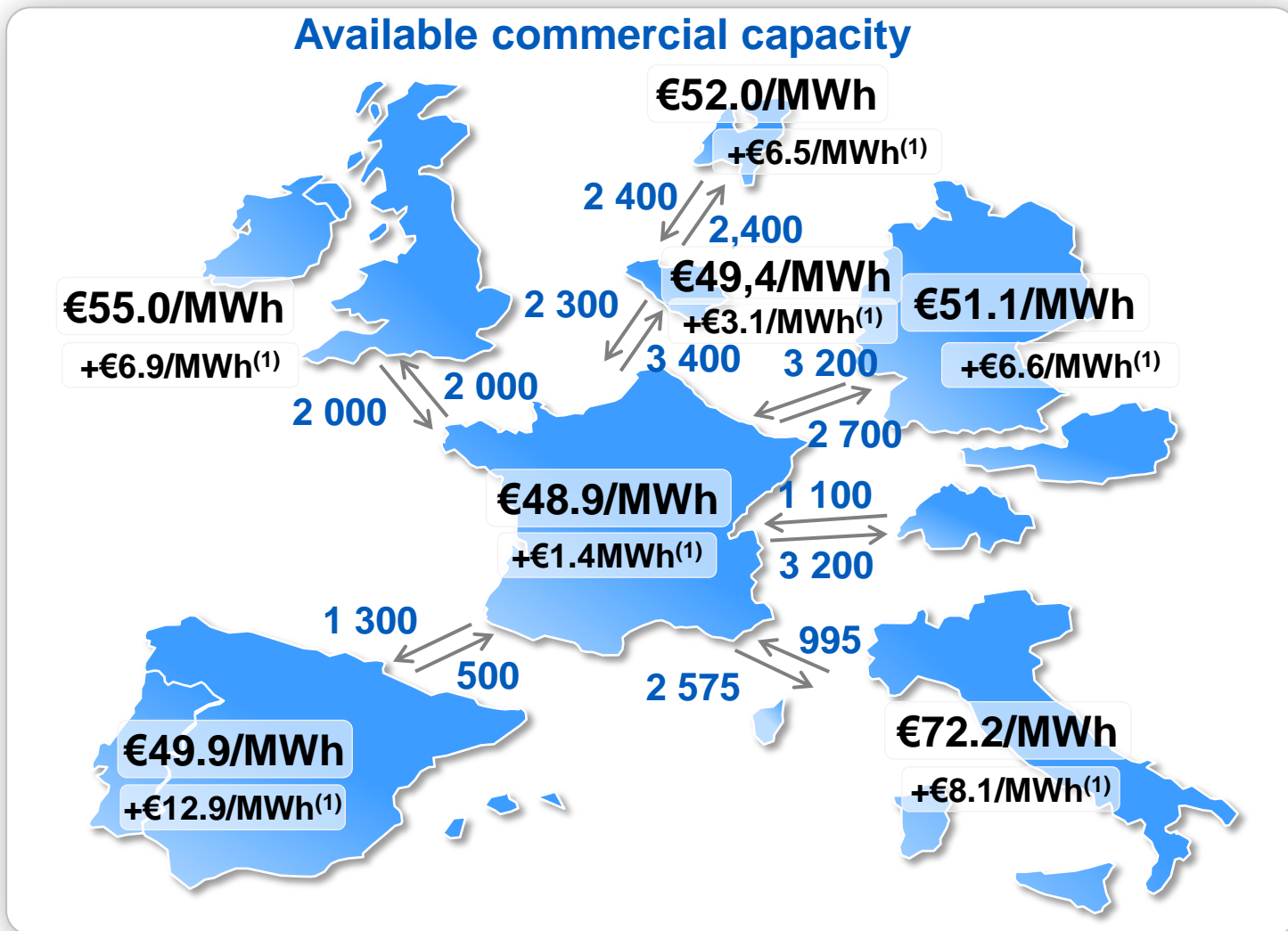
# 2011 Annual Results



Appendices - Markets

# European energy market still divided into "electric plates"

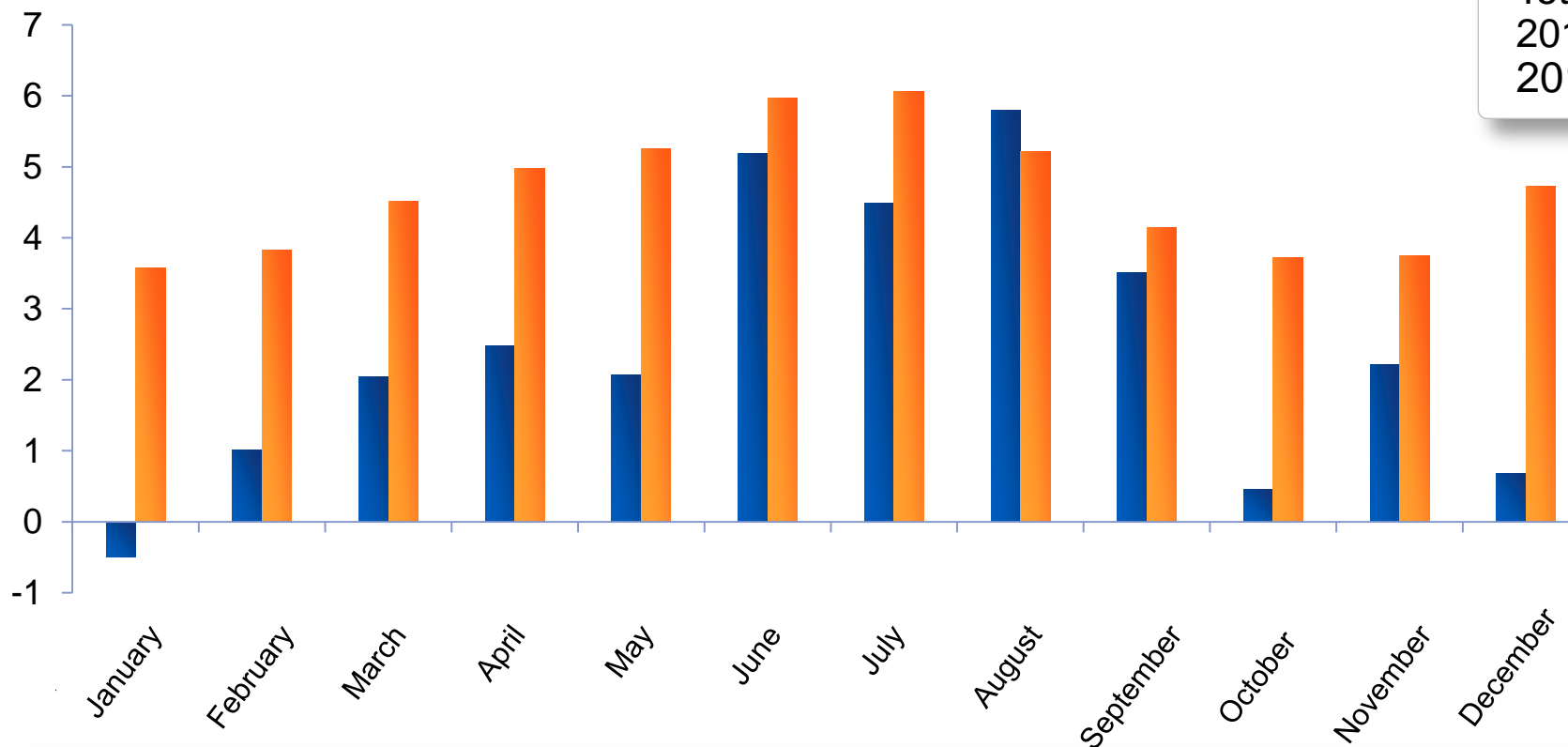
- average prices in 2011 -



- Interconnected but distinct market zones
- Interconnections: Commercial Capacity for winter 2010-11, estimated at 22/02/2011 (in MW, source ENTSOe)
- Prices: average spot prices (base 2011) for France (Epex), Germany (Epex), the UK (EDFT), Spain (OMEL), the Netherlands (APX) and Italy (Ipex)

# French electricity trade balance 2011 vs. 2010

In TWh



Total exports  
 2010 +29.45 TWh  
 2011 +55.76 TWh

■ 2010  
 ■ 2011

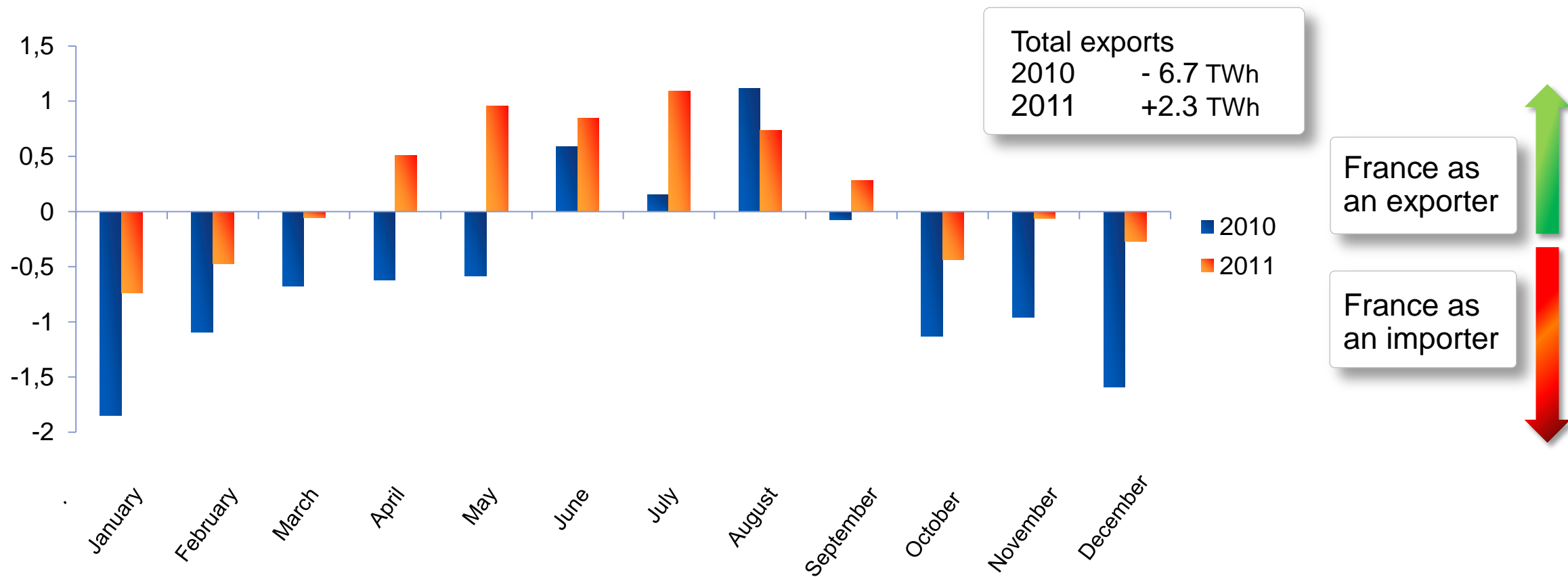
France as an exporter

France as an importer



Exports in 2011 up due to strong nuclear availability and low French demand

# Trade with Germany 2011 vs. 2010



Back to a 2011 positive average due to a less competitive German fuel mix following the closing of 8 German nuclear plants

# 2011 French trade balance

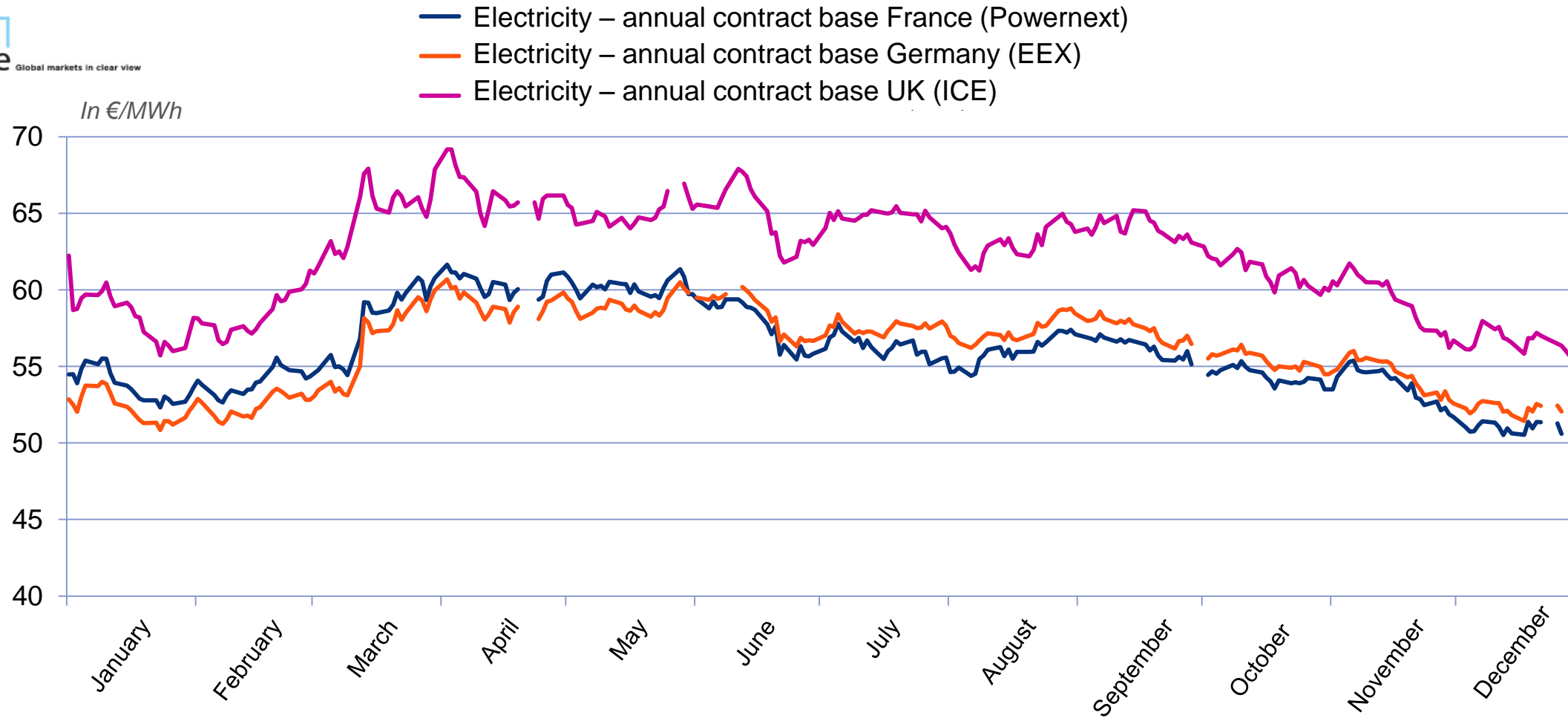
<i>In TWh</i>		January	February	March	April	May	June	July	August	September	October	November	December
<b>Germany</b>	exports	0.6	0.5	0.9	1.0	1.3	1.3	1.3	1.2	0.8	0.6	0.7	0.6
	imports	1.4	1.0	1.0	0.5	0.4	0.4	0.2	0.4	0.5	1.0	0.7	0.9
	balance	-0.7	-0.5	-0.1	0.5	1.0	0.8	1.1	0.7	0.3	-0.4	-0.1	-0.3
<b>United Kingdom</b>	exports	0.9	0.7	0.7	0.6	0.5	0.6	0.7	0.7	0.4	0.4	0.5	1.0
	imports	0.4	0.4	0.3	0.1	0.3	0.1	0.1	0.1	0.1	0.3	0.6	0.2
	balance	0.5	0.3	0.4	0.5	0.2	0.6	0.7	0.6	0.3	0.1	0.0	0.8
<b>Belgium</b>	exports	0.8	0.7	0.9	0.7	0.6	0.9	0.8	0.5	0.6	0.3	0.4	0.5
	imports	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
	balance	0.7	0.6	0.8	0.6	0.5	0.9	0.6	0.4	0.5	0.0	0.1	0.2
<b>Spain</b>	exports	0.1	0.1	0.1	0.2	0.3	0.5	0.6	0.7	0.5	0.6	0.2	0.7
	imports	0.4	0.2	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.4
	balance	-0.2	-0.2	-0.4	-0.2	0.1	0.4	0.5	0.6	0.3	0.4	-0.1	0.3
<b>Italy</b>	exports	1.5	1.7	1.7	1.5	1.4	1.3	1.0	0.8	0.8	1.8	1.8	1.7
	imports	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
	balance	1.4	1.6	1.5	1.5	1.3	1.3	1.0	0.8	0.8	1.6	1.7	1.6
<b>Switzerland</b>	exports	2.5	2.3	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4
	imports	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
	balance	2.0	2.0	2.2	2.2	2.1	2.1	2.2	2.1	2.0	2.1	2.2	2.2
<b>Total</b>	exports	6.5	6.0	6.8	6.3	6.3	6.8	6.6	6.0	5.2	6.0	6.0	6.9
	imports	2.9	2.1	2.2	1.3	1.1	0.9	0.6	0.8	1.1	2.2	2.2	2.2
	balance	3.583	3.825	4.522	4.984	5.258	5.968	6.058	5.212	4.142	3.720	3.756	4.732

# French trade balance 2010 vs. 2011

<i>In TWh</i>		January	February	March	April	May	June	July	August	September	October	November	December
<b>Germany</b>	exports	0.2	0.5	0.7	0.7	0.8	1.5	1.2	1.7	0.8	0.6	0.5	0.2
	imports	2.1	1.6	1.4	1.3	1.4	0.9	1.1	0.6	0.9	1.7	1.4	1.8
	balance	-1.8	-1.1	-0.7	-0.6	-0.6	0.6	0.2	1.1	-0.1	-1.1	-1.0	-1.6
<b>United Kingdom</b>	exports	0.3	0.3	0.4	0.5	0.8	1.0	1.1	1.3	0.7	0.4	0.7	0.9
	imports	0.9	0.8	0.8	0.4	0.3	0.1	0.1	0.0	0.2	0.8	0.5	0.5
	balance	-0.7	-0.5	-0.4	0.1	0.5	1.0	1.0	1.3	0.5	-0.4	0.2	0.4
<b>Belgium</b>	exports	0.1	0.1	0.3	0.3	0.2	0.7	0.5	0.4	0.4	0.1	0.3	0.5
	imports	0.6	0.6	0.6	0.3	0.4	0.1	0.2	0.2	0.3	0.6	0.4	0.3
	balance	-0.5	-0.4	-0.4	0.0	-0.2	0.6	0.2	0.2	0.1	-0.5	-0.1	0.3
<b>Spain</b>	exports	0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.5	0.3	0.1	0.1	0.1
	imports	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.5
	balance	-0.4	-0.3	-0.4	-0.3	-0.1	0.0	0.0	0.4	0.1	-0.2	0.0	-0.4
<b>Italy</b>	exports	1.4	1.7	1.8	1.5	1.3	1.5	1.7	0.8	1.3	1.6	1.6	1.1
	imports	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.4
	balance	1.3	1.6	1.8	1.5	1.2	1.5	1.6	0.8	1.3	1.3	1.4	0.7
<b>Switzerland</b>	exports	2.2	2.0	2.3	2.1	2.1	2.0	2.1	2.2	2.1	1.9	2.2	2.4
	imports	0.6	0.3	0.2	0.2	0.8	0.4	0.7	0.2	0.5	0.6	0.4	1.1
	balance	1.6	1.8	2.0	1.9	1.3	1.6	1.4	2.0	1.6	1.3	1.7	1.3
<b>Total</b>	exports	4.3	4.7	5.5	5.2	5.2	7.0	6.8	6.9	5.6	4.7	5.4	5.2
	imports	4.8	3.7	3.5	2.7	3.1	1.8	2.3	1.1	2.1	4.3	3.2	4.5
	balance	-0.488	1.009	2.044	2.485	2.072	5.186	4.489	5.793	3.511	0.453	2.211	0.685

# Electricity prices in France, the UK and Germany (y+1) from 01/01/2011 to 31/12/2011

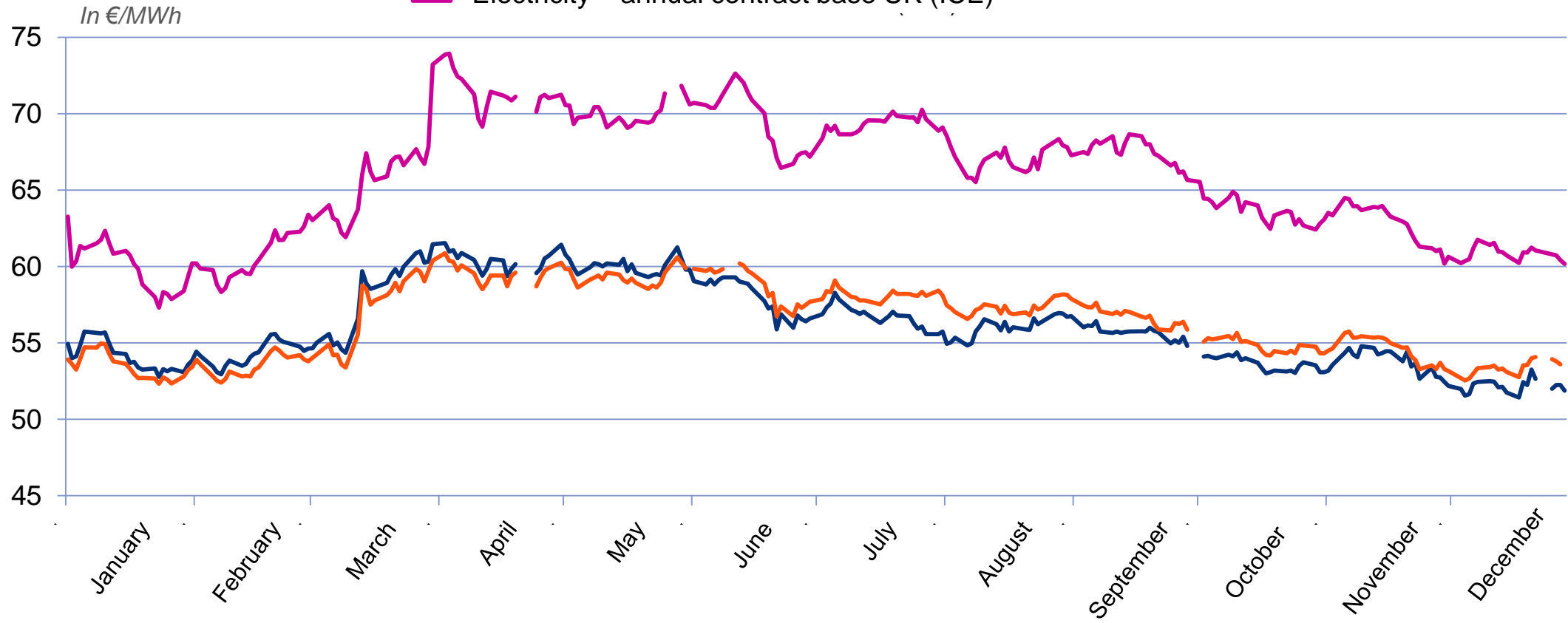
ICE  
Global markets in clear view



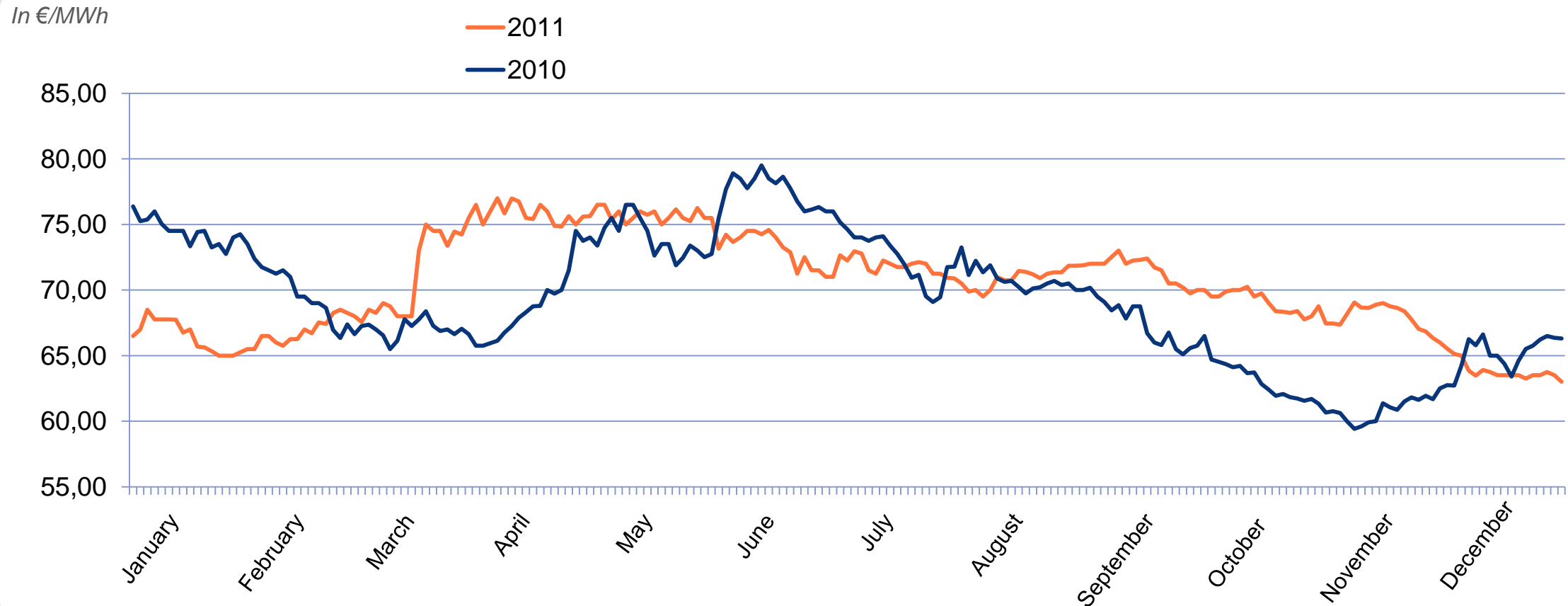
# Electricity prices in France, the UK and Germany (y+2) from 01/01/2011 to 31/12/2011



- Electricity – annual contract base France (Powernext)
- Electricity – annual contract base Germany (EEX)
- Electricity – annual contract base UK (ICE)

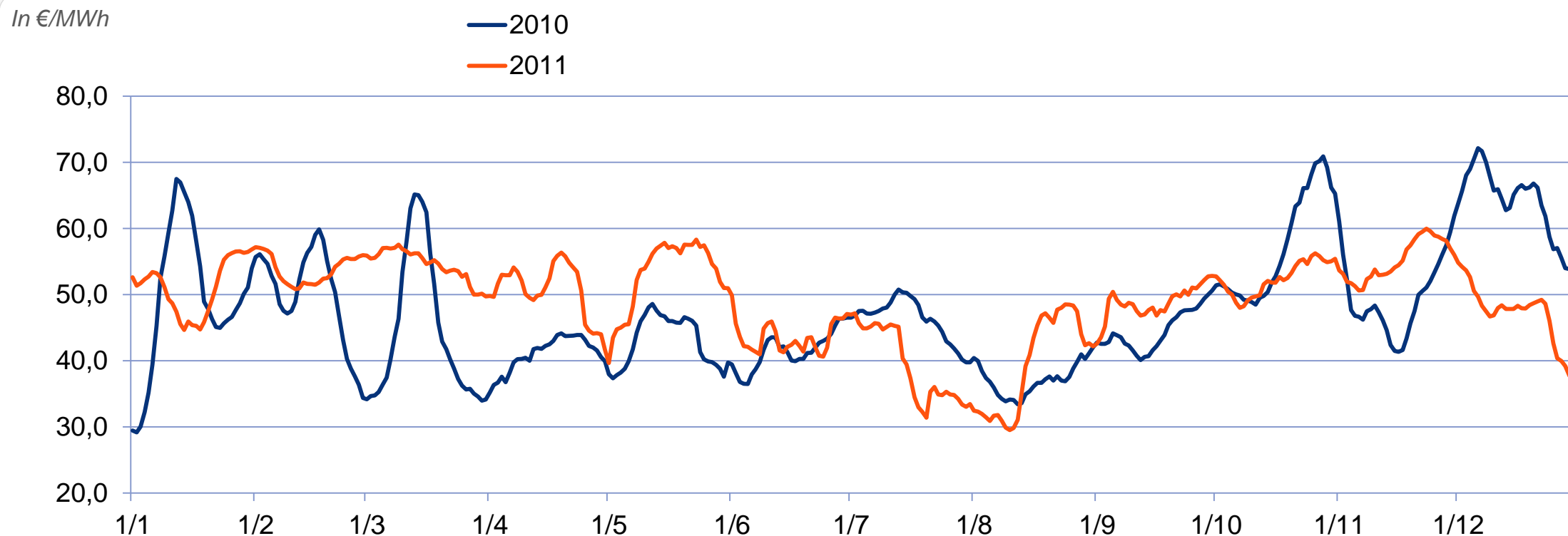


# Electricity prices in France (y+1) 2011 vs. 2010 in peak



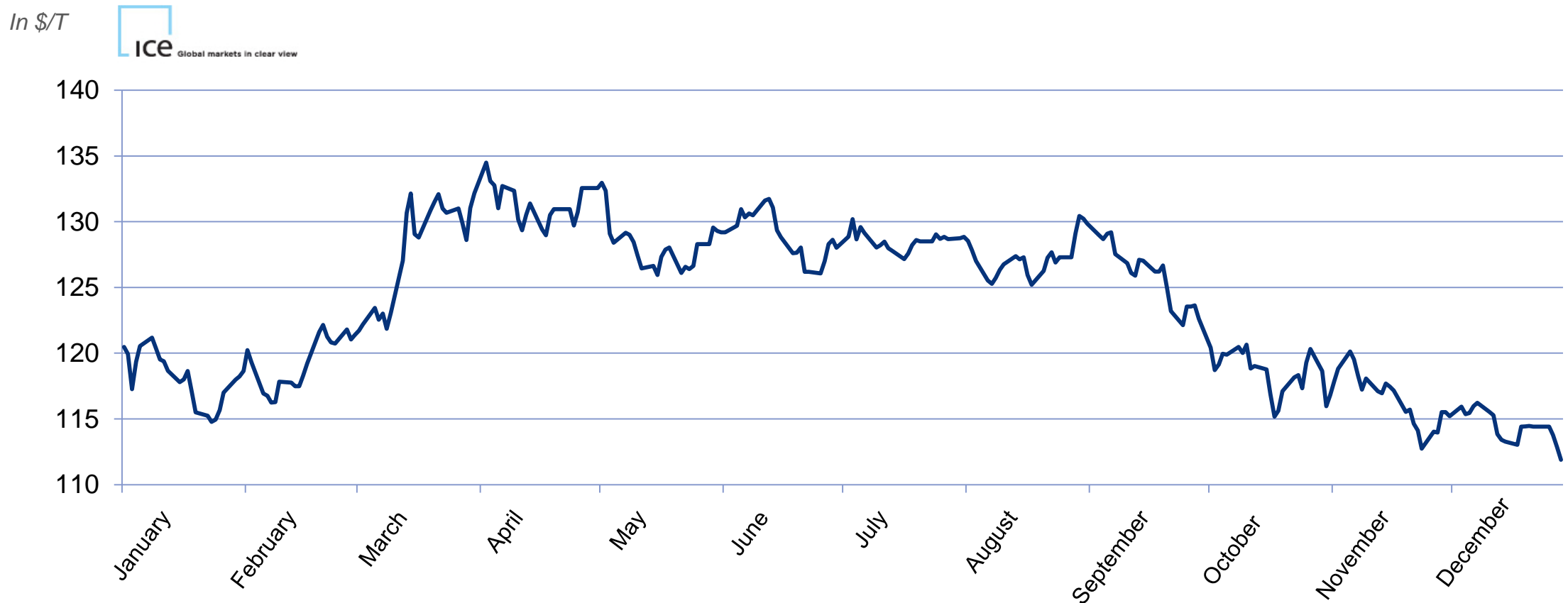
Spike in "forward" prices in March and April due to the closing of 8 nuclear plants in Germany followed by a drop in the second half as CO2 prices fell.

# French baseload spot prices in 2011



Price increase in 2011 linked to fuel price increases and poor water availability, despite good nuclear output

# Coal prices (Y+1) from 1/01/2011 to 31/12/2011



Sharp rise in March as 8 nuclear plants in Germany were shuttered, followed by a drop in response to European sovereign debt crisis

# Brent prices (N+1) in \$/bbl from 01/01/2011 to 31/12/2011



First quarter jump on account of unrest in certain oil producing countries, then a drop as a result of the European sovereign debt crisis.

# NBP gas prices ( $Y_{\text{gas}+1}$ ) from 01/01/2011 to 31/12/2011



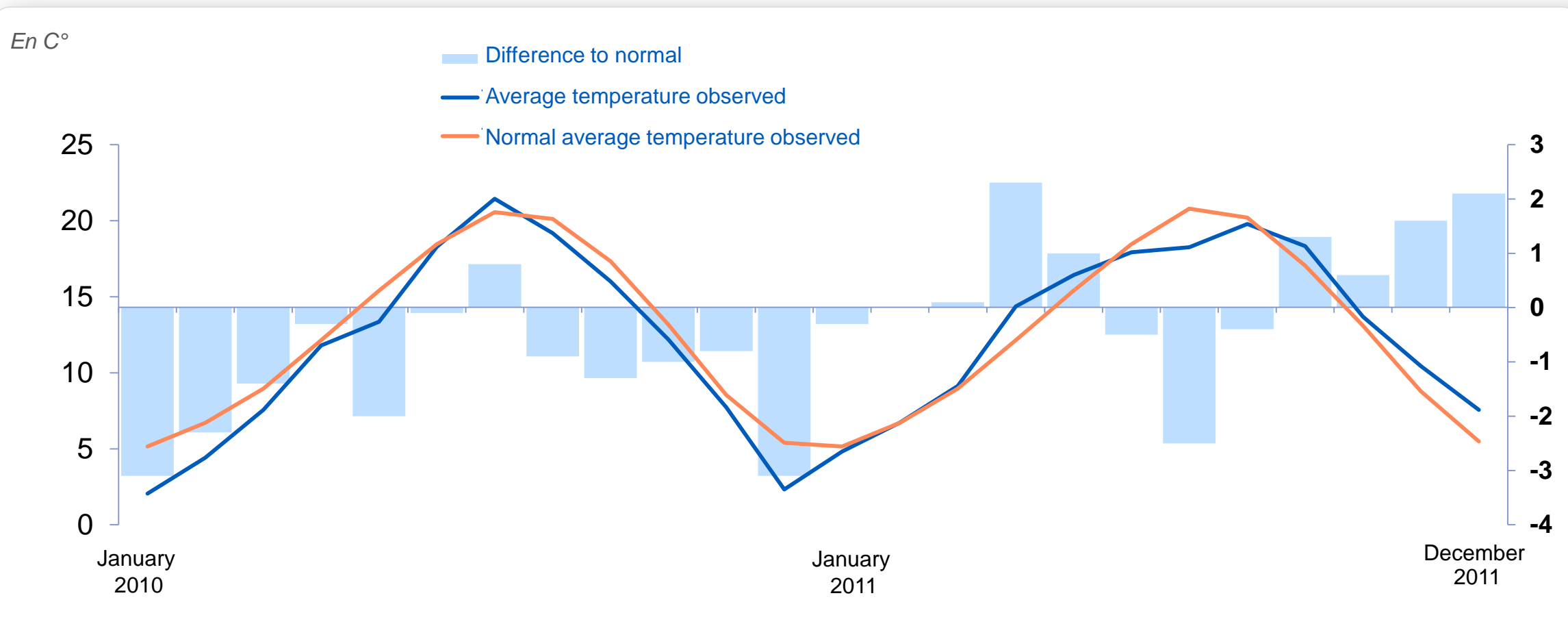
First half-year up due to political tensions in North Africa and the Fukushima accident, followed by a drop that resulted from a sharp increase in LNG supplies and the European sovereign debt crisis.

# CO<sub>2</sub> prices (Y+1) from 01/01/2011 to 31/12/2011



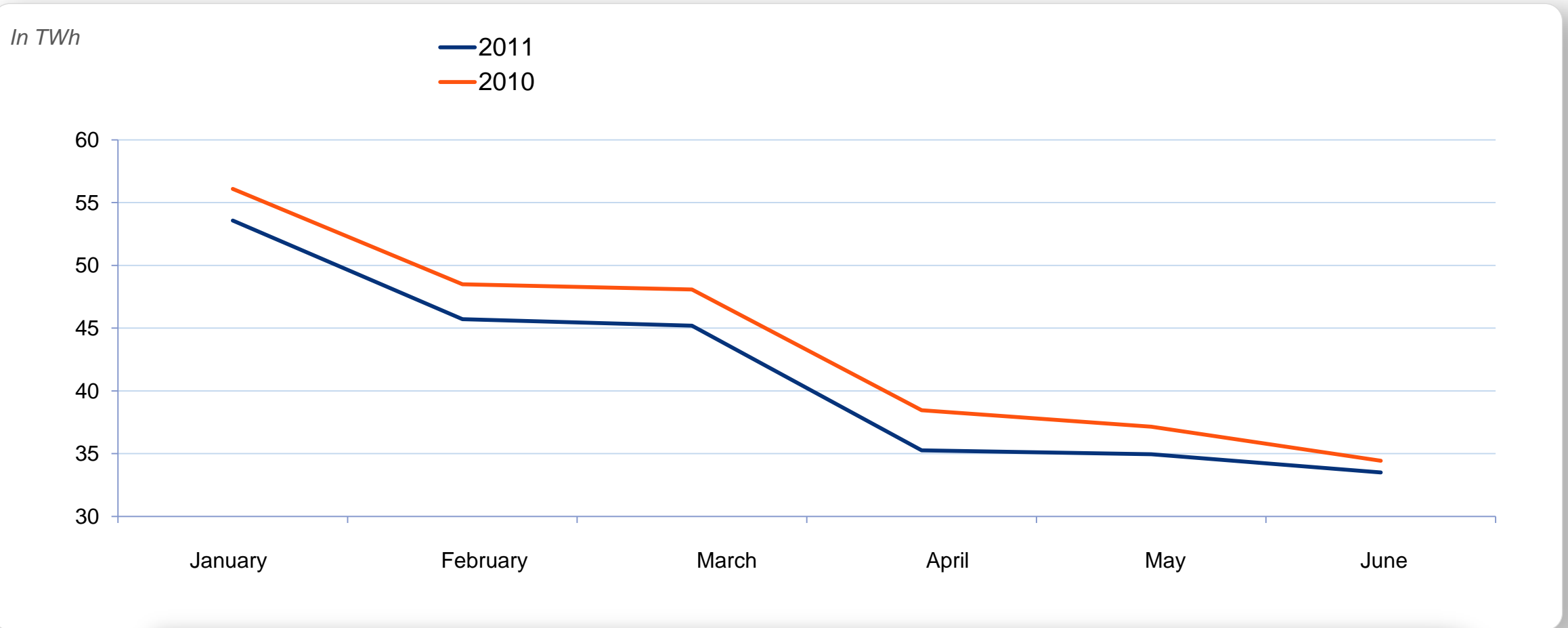
Drop in the second half linked to implementation of an energy efficiency directive in June and the European sovereign debt crisis.

# Monthly temperatures averages in France from 01/01/2010 to 31/12/2011 and difference with normal



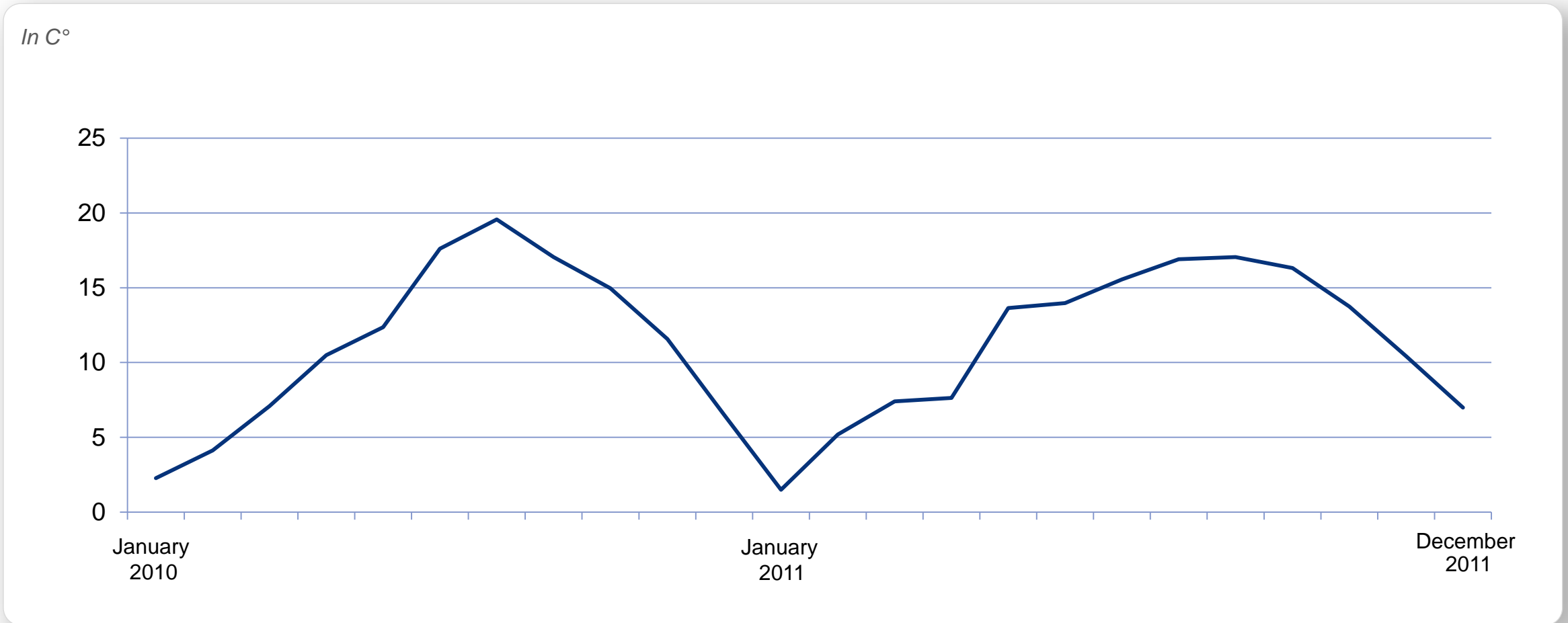
2011 was the hottest year since 1900  
 2010 was the coldest year since 1990

# French consumption 2010 vs 2011



**Decrease by 6.8% of 2011 global consumption vs. 2010, due to huge increase in temperatures and termination of Eurodif contract**

# London\* Monthly averages temperatures from 01/01/2010 to 30/12/2011



# ANNUAL RESULTS 2011

Appendices