



# EDF Presentation

April 2025



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# EDF Presentation

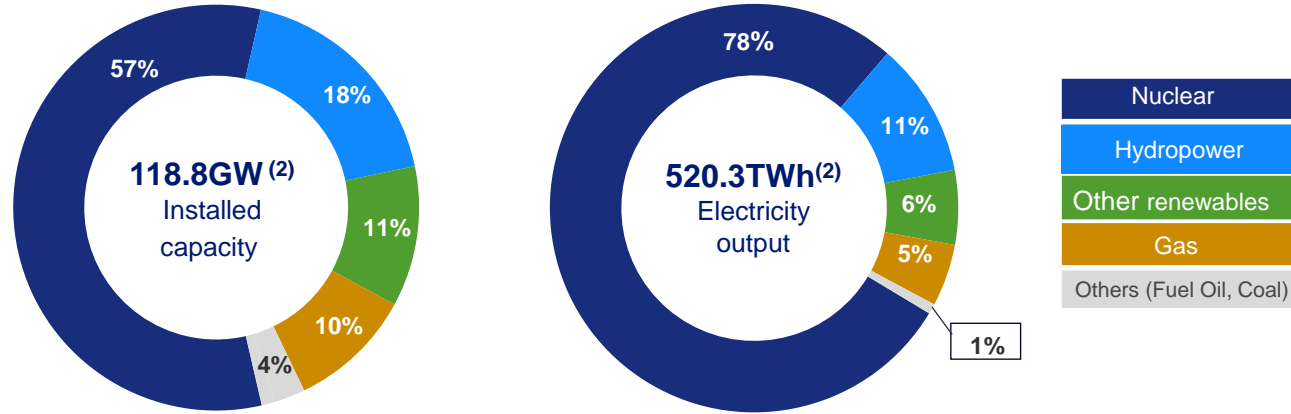
EDF is building the electricity system of tomorrow



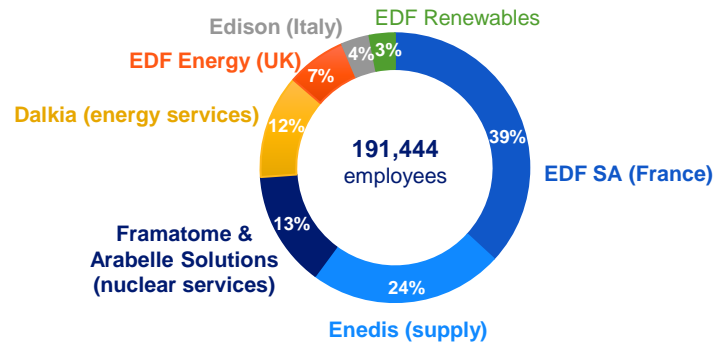
# LEADER IN LOW-CARBON ELECTRICITY GENERATION

First producer worldwide of zero direct CO<sub>2</sub> emission electricity<sup>(1)</sup> with a carbon intensity of 30gCO<sub>2</sub>/kWh

Operational figures as of end 2024



A leader in nuclear and renewable with 94% of decarbonised generation



41.5 million customers<sup>(3)</sup>

## 2024 Financials

- Sales: **€118.7bn**
- EBITDA: **€36.5bn**
- Net income excluding non-recurring items: **€15.2bn**
- Net investments<sup>(4)</sup>: **€22.4bn**
- Net financial debt : **€54.3bn**  
o/w green bonds outstanding: **~€19.8bn**
- Ratings: BBB positive (S&P) / Baa1 stable (Moody's) / BBB+ negative (Fitch)

(1) Source: Enerdata Power Plant Tracker 2023

(2) Consolidated capacities and output

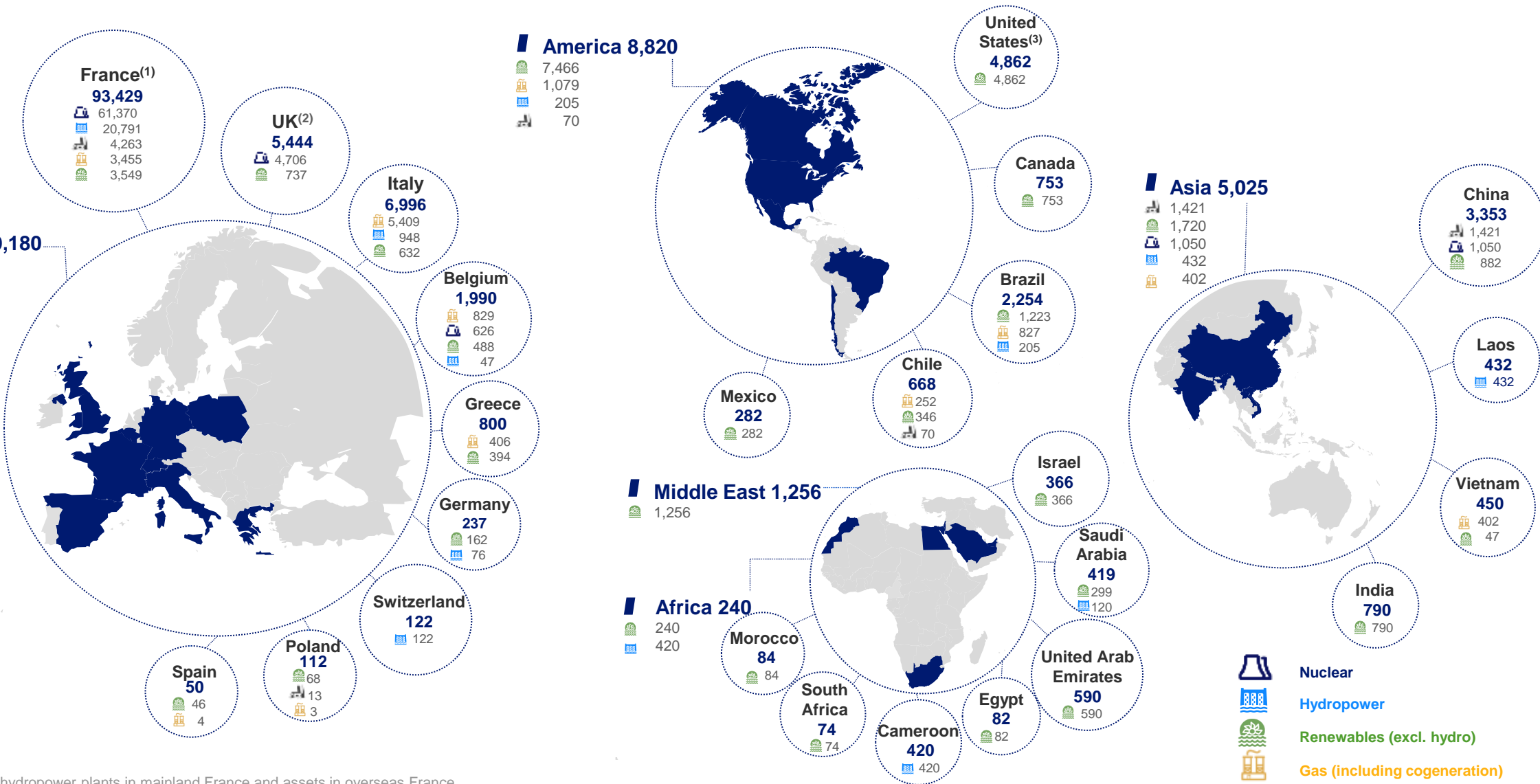
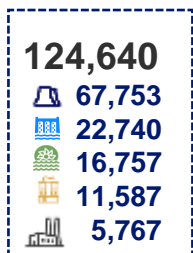
(3) The customer portfolio consists of electricity, gas and recurring services contracts.

(4) Total net investments excluding disposal plan.

# EDF group's net installed capacity by country at end-2024

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

In MW



(1) Including small hydropower plants in mainland France and assets in overseas France.

(2) End of generation of West Burton A on 31/03/2023, last coal plant in the UK for EDF.

(3) Excluding energy storage capacity and EDF Renewables biogas production capacity.

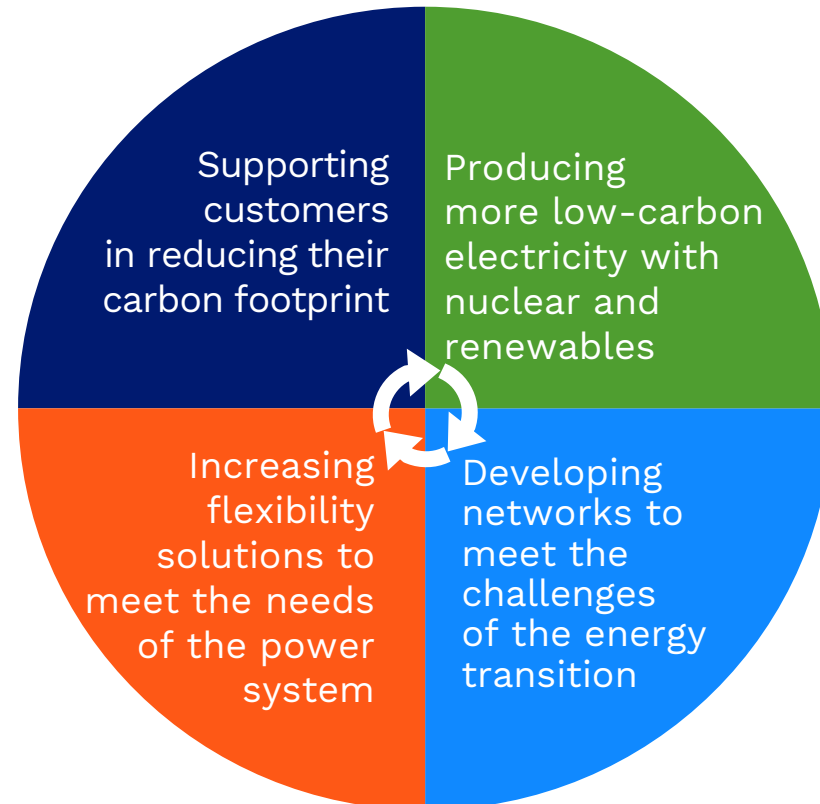
# Building the electricity system of tomorrow with Ambitions 2035

## Customers:

- Be a leader in integrated decarbonisation solutions<sup>(1)</sup>, notably by accelerating the electrification of customer uses as a substitute for fossil uses

## Flexibility:

- Decarbonisation of flexible generation assets, storage facilities (hydropower and batteries), smart charging of electric vehicles, customer load shedding



## Low carbon generation:

- Maximise the availability of the existing nuclear fleet and industrialise the construction programme for new reactors
- Accelerate the development of renewable energies (including hydropower)
- Develop projects through business models maximising the impact of the Group

## Networks:

- Modernisation and digitalisation of distribution networks<sup>(2)</sup> and increase in connections for new system users (renewable energy, charging stations)

(1) Offers and services in the building, industry and transport sectors.

(2) In France, the public distribution network is managed independently by Enedis.

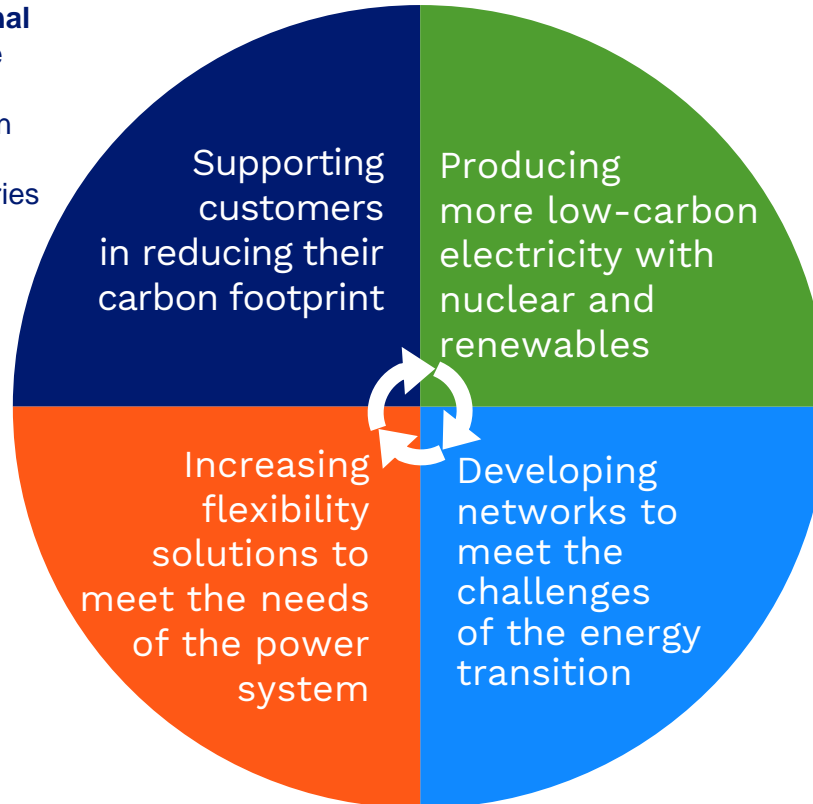
# EDF is building the electricity system of tomorrow with "Ambitions 2035"

## Customers:

- Contributing directly to **150TWh of additional demand of electricity** in France, to replace fossil energies
- 8-9 million customers with a decarbonization offer in the G4 countries <sup>(1)</sup>
- **> 45 Mt CO<sub>2</sub> avoided/year** in the G4 countries
- 1.5 contract/individual customer in the G4 countries

## Flexibility:

- Leader in flexibility solutions for its core markets
- **+27GW of flexibilities** (flexible decarbonized generation and storage assets, customer flexibility)



## Low-carbon generation:

- **75% of dispatchable assets** in the energy mix <sup>(2)</sup>
- Ability to deliver up to 2 nuclear reactors/year
- **8GW gross of renewable** commissioned/year by the Group on average over 2024-2035
- Ensure maximum available electricity supply, safely and on time
- **22gCO<sub>2</sub>** emitted on average/kWh produced

## Networks <sup>(3)</sup>:

- Continuing the development of **network intelligence**
- **Meeting customers' connection needs** while ensuring optimised network management
- Restoration of power to 90% of customers within less than 48 hours in the event of a climate hazard (excluding exceptional circumstances)
- Network resilience in non-interconnected zones, with 100% renewable electricity

(1) G4 countries are France, Italy, UK, Belgium

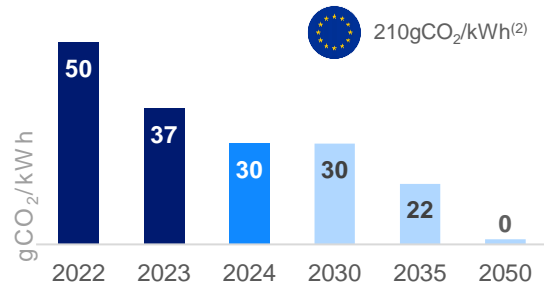
(2) Calculated in net TWh

(3) In France, the public distribution network is managed independently by Enedis

# A commitment to low-carbon growth

## Objective: net zero CO<sub>2</sub> emissions by 2050

Carbon intensity

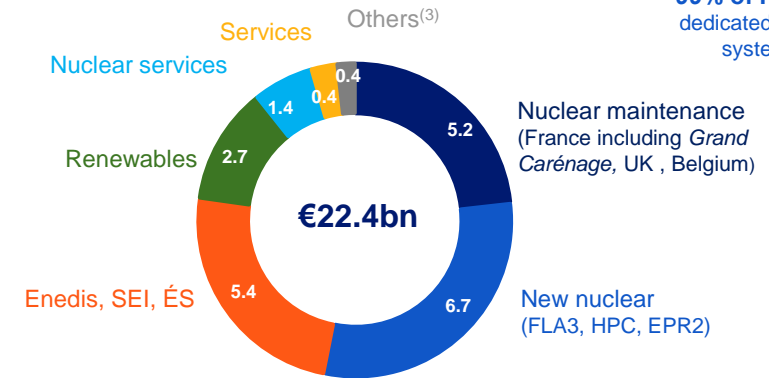


**4gCO<sub>2</sub>eq/kWh**  
carbon footprint of nuclear life-cycle

→ EDF's trajectory validated by Moody's as in line with a 1.5°C global warming scenario

## 94% of the net investments in accordance with the net zero emissions target

In billions of euros



**99% of R&D's operating budget** dedicated to decarbonation & energy systems transition in France

## Nuclear pipeline of projects



### 6 EPR2

- > Penly (~3.2GW)
- > Gravelines (~3.2GW)
- > Bugey (~3.2GW)



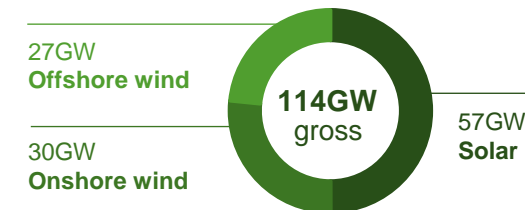
### 4 EPR

- > Hinkley Point C (~3.3GW under construction)
- > Sizewell C (~3.3GW)

### Small Modular Reactor NUWARD

### International EPR projects

## Renewable pipeline of projects



→ Target of 8W gross commissioned / year

(1) Direct carbon emissions related to generation, excluding life cycle assessment of generation means & fuels.

(2) Value in 2023, European Environment Agency.

(3) Mainly thermal maintenance, gas, property, central functions.



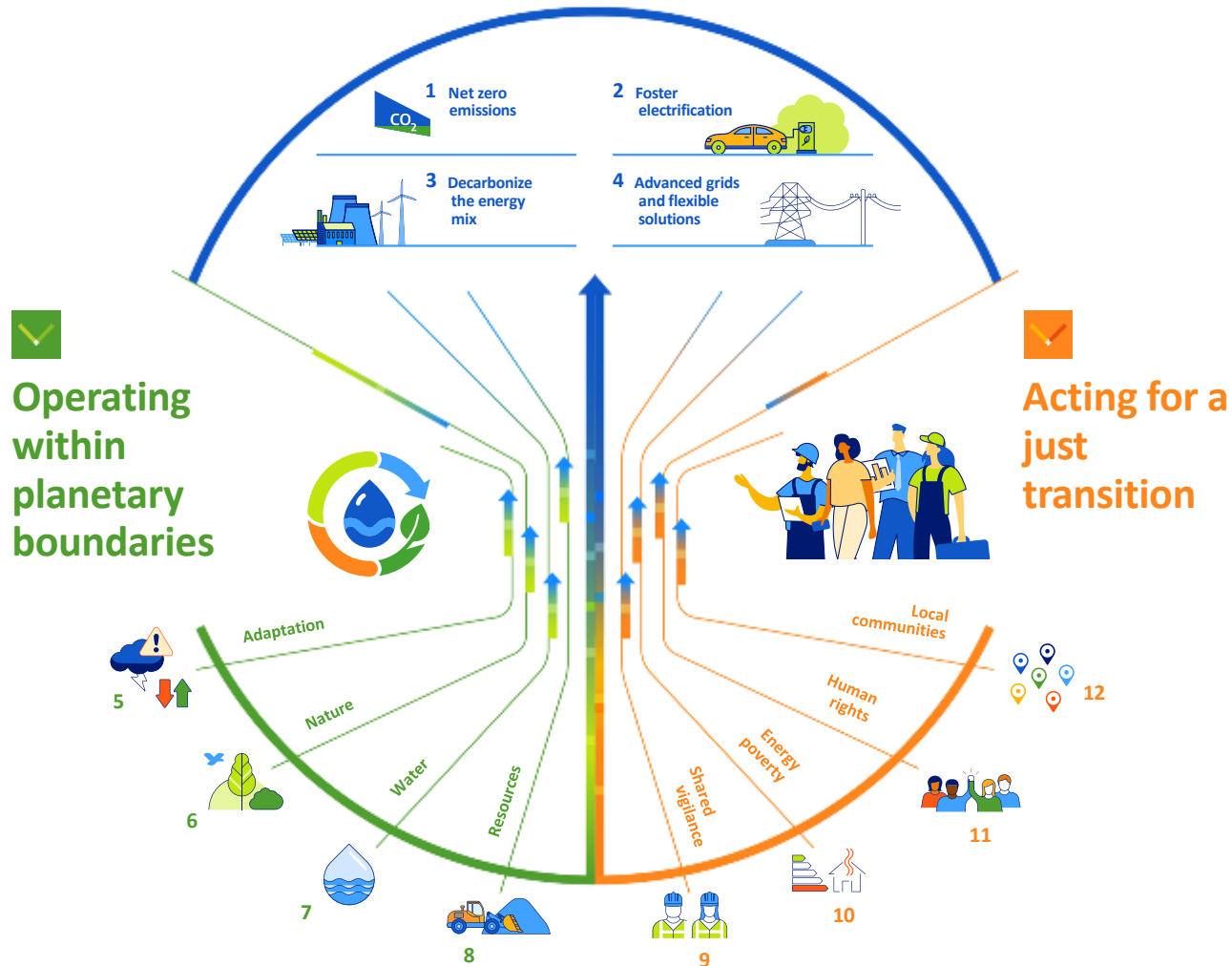
# OUR CSR COMMITMENTS

## Our raison d'être:

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.

As part of our "Ambitions 2035" strategic plan, EDF has set out 3 main objectives and 12 CSR commitments.

## Building the electricity system of tomorrow



**Our ambition: to be the generation making the transition**

## Building the electricity system of tomorrow

- 1 — **Achieve net zero emissions** across all our activities by 2050.
- 2 — **Foster electrification:** support our customers in adopting innovative, low-carbon solutions.
- 3 — **Decarbonize the energy mix:** accelerate the displacement of fossil fuels with low-carbon electricity and heat, through our existing and future nuclear and renewable power plants.
- 4 — **Develop advanced grids and flexible solutions** to meet the needs of the electricity system and drive the energy transition.



## Operating within planetary boundaries

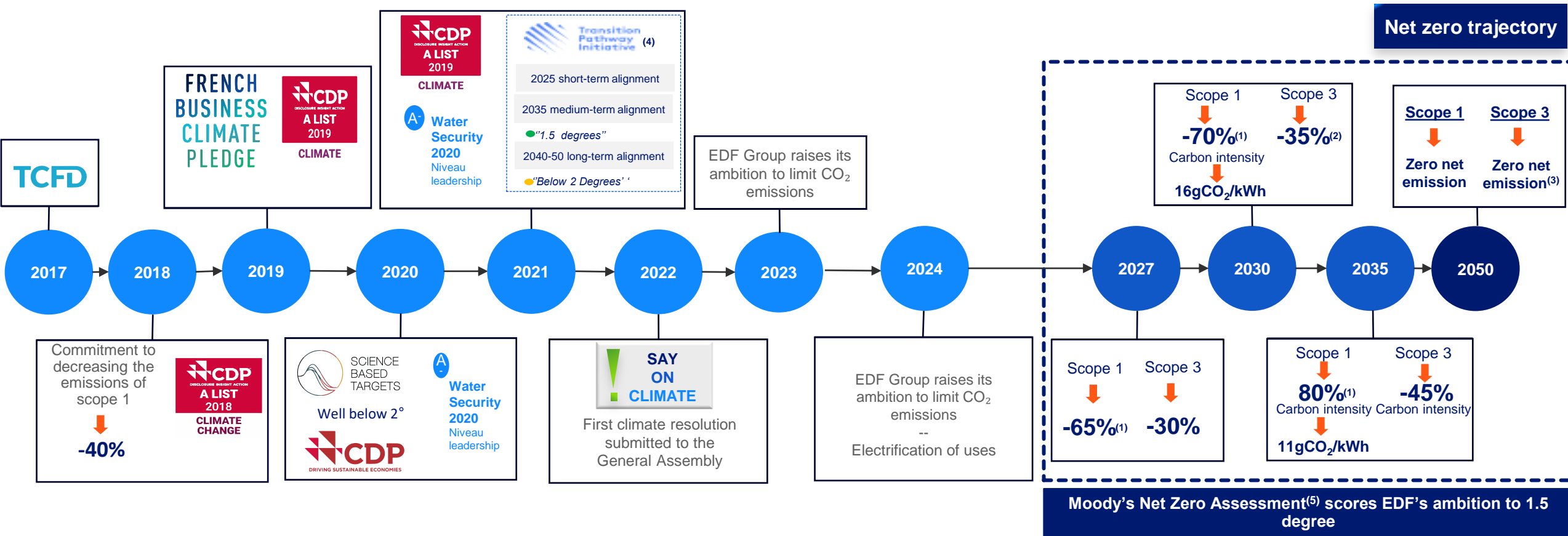
- 5 — **Adaptation:** reinforce the capacity of our local operations to adapt to climate disruptions.
- 6 — **Nature:** contribute to the regeneration of ecosystems and mitigate our negative impacts.
- 7 — **Water:** contribute to preserving water resources to increase the resilience of ecosystems and to satisfy water demand in a concerted and sustainable manner.
- 8 — **Resources:** commit to a circular model which requires fewer raw materials, as well as to the responsible management of our nuclear and conventional waste.

## Acting for a just transition

- 9 — **Shared vigilance:** safeguard the health and safety of all employees, partners and suppliers.
- 10 — **Combat energy poverty.**
- 11 — **Champion human rights** to promote greater inclusion, diversity and positive impact in our value chain.
- 12 — **Promote thriving local communities:** maximise our positive impact on the territories where we operate through consultation with stakeholders and respect for their fundamental rights.

# EDF, a company committed to protecting the climate

Since the Paris Agreement, EDF developed its actions and commitments dedicated to climate: committing to its direct and indirect emissions, developing its governance and keeping its leader position in CDP Climate.

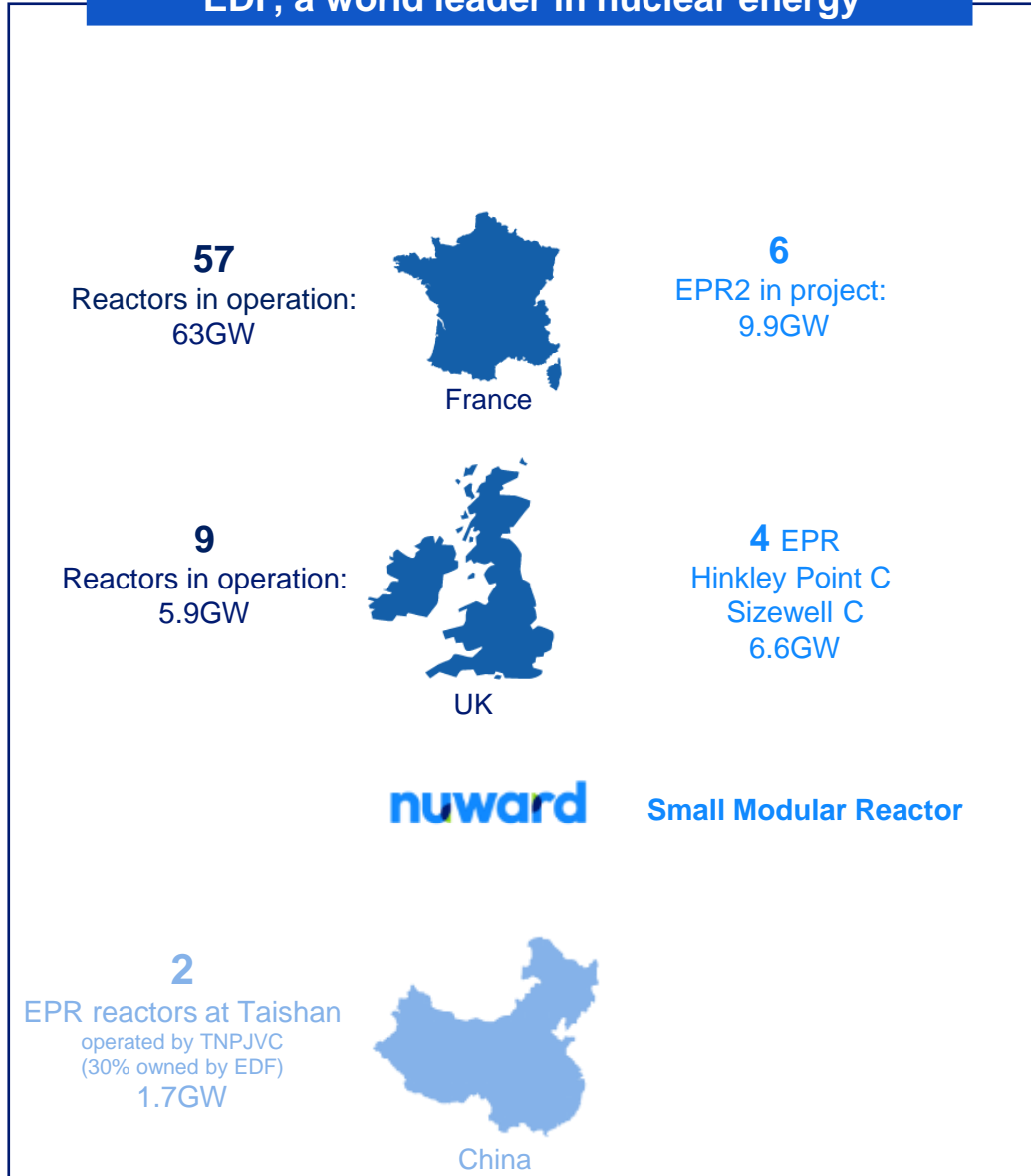


(1) Vs 2017 ; (2) Vs 2019.  
 (3) Expressed by: almost zero direct emissions (Scope 1), decrease in the indirect emissions as important as possible (Scope 3), contribution of the residual emissions through negative emission projects (3 scopes).  
 (4) Transition pathway [initiative](#).  
 (5) Net Zero Assessment [report](#).



# EDF: unique & global expertise and know-how in the nuclear industry

## EDF, a world leader in nuclear energy



## EDF manages the entire lifecycle of nuclear generation facilities: design, operation and decommissioning

EDF and its subsidiaries **Framatome**, **Edvance**, **Arabelle Solutions** have engineering teams to develop projects in France and abroad and to operate the fleet:

### Construction of new reactors:

- **In France:** Flamanville 3 EPR connected in 2024, project of 6 EPR2 and studies for additional 8 EPR2
- **In the UK:** construction of 2 Hinkley Point C EPR with a Contract for Difference, development of Sizewell C with a Regulated Asset Base funding
- **Development** of a type of SMR, **Nuward™**
- Offers for the development or construction of projects: engineering and procurement for 6 EPR (10GW) to be built by NPCIL at Jaitapur in India

Extension of the life of the reactors in France beyond 40 years with constant focus on the safety standard through the “**Grand Carénage**” programme

Decommissioning of nuclear power plants with the subsidiary **Cyclife** and radioactive waste treatment

# EDF: a European leading player in renewable energies

**Installed capacity: 39.5GW net<sup>(1)</sup>**

A diversified mix with 39.5GW in operation

- **22.7GW of hydropower**
- **16.3GW of wind and solar**
- **0.5GW others** (biomass and geothermal)

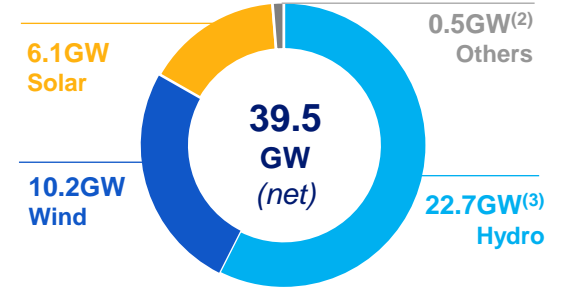
Hydropower

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

A global leader in wind and solar energy

- **3.2GW gross** commissioned in 2024
- **8.6GW gross** under construction (1.9GW in onshore wind, 0.7GW in offshore wind, 6.0GW in solar)

**Capacity by sector:**



**Capacity by geography:**



NB: data at end-2024.

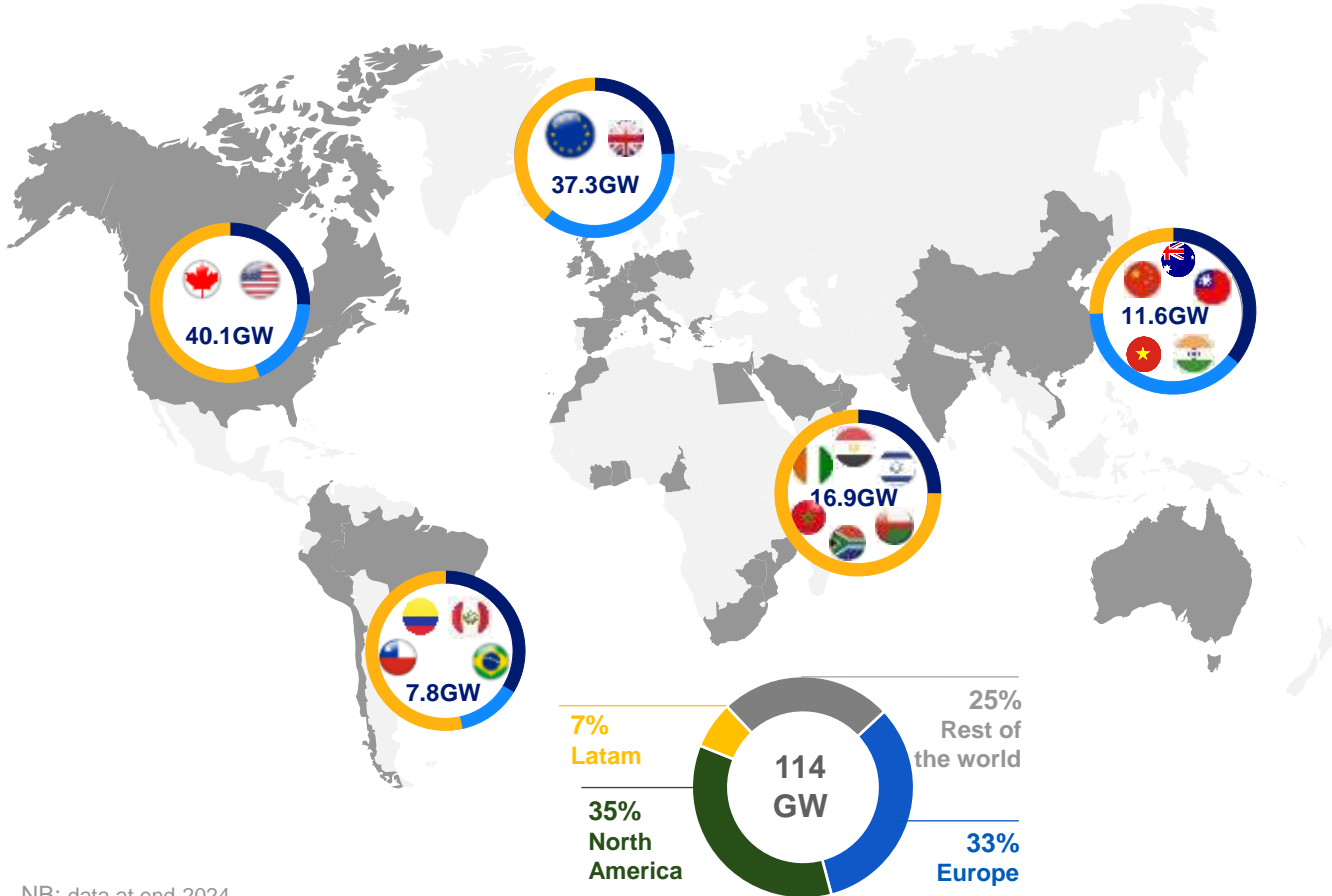
(1) Installed capacity shown as net, corresponding to the consolidated data based on EDF's participation in Group companies, including investments in affiliates and joint ventures.

(2) Biomass and geothermal.

(3) Including sea energy: 0.24GW.

# A portfolio of wind and solar projects of 114GW gross<sup>(1)</sup>

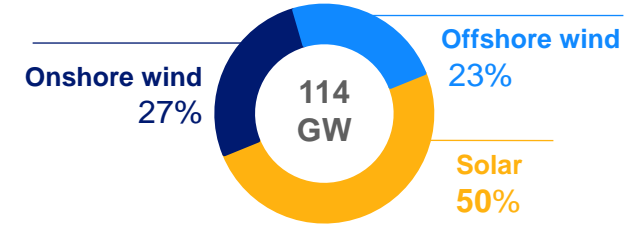
## A geographically diversified portfolio



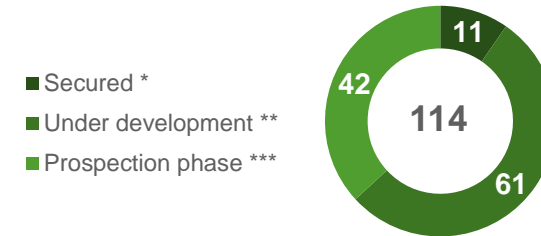
NB: data at end-2024.

- (1) Excluding capacities under construction. Gross data corresponding to 100% of the capacity of the project.
- (2) Projects in prospection phase are included in the pipeline.
- (3) Not probability-based.

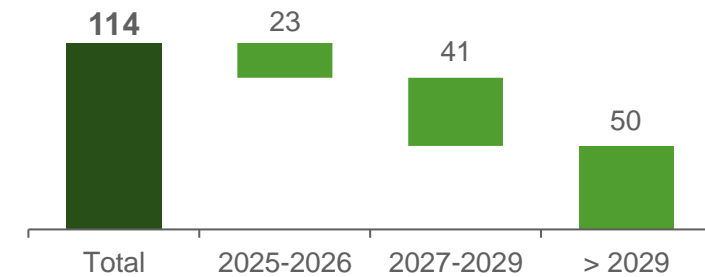
## Balanced between wind and solar



## Breakdown by development phase<sup>(2)</sup> (in GW)



## Breakdown by date of start of construction (in GW)<sup>(3)</sup>



\* Securing a power purchase agreement (following call for tenders, auction, OTC negotiation)

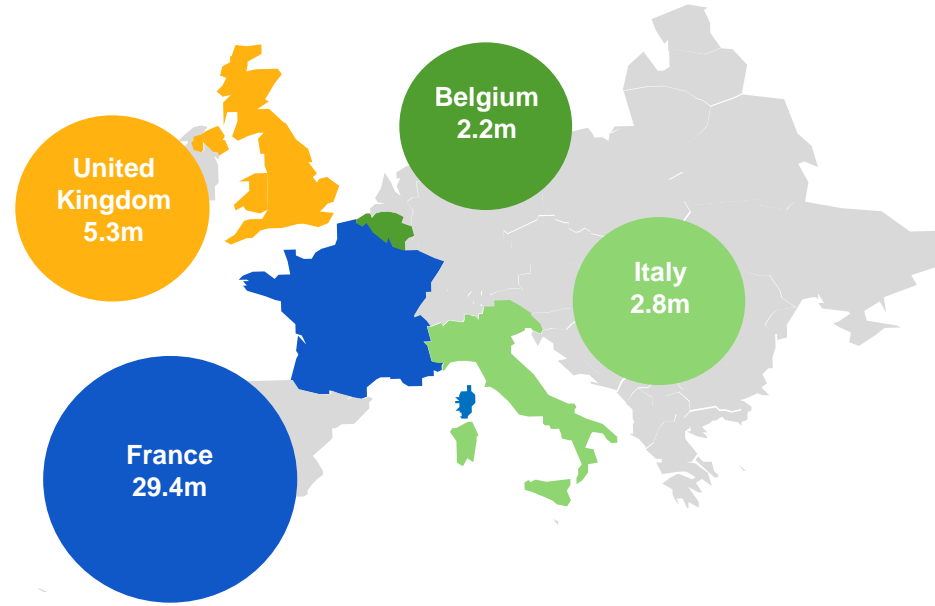
\*\* Sufficient land securisation and start of technical studies

\*\*\* Start of land identification and preliminary studies

# Supply of electricity, gas and heat to 41.5m customers at end-2024

**Electricity**  
34.9m customers

**Gas**  
6.6m customers



## United Kingdom: EDF Energy

3.1m electricity customers  
2.2m gas customers

45.0TWh sales of electricity sold  
27.1TWh sales of gas

5.8m residential customers accounts

Highly competitive market with ~16 suppliers

9.7% market share on all its accounts



## France: EDF (incl. ES)

Nearly 26.8m electricity customers  
More than 2.6m gas customers

217.1TWh electricity sold to customers  
51.5TWh gas sold to customer

## France: SEI (in non-interconnected zones)

1.3m electricity customers  
9.9TWh electricity sold to customers

## France: Dalkia (excluding speciality subsidiaries)

22.2TWh sold  
19.5TWh for the heating and cooling segment  
2.7TWh for the electricity segment

21.5m customers



## Belgium: Luminus

The second largest player in the Belgian energy market. ~25% market share

1.4m electricity customers  
0.8m gas customers

12.7TWh electricity sold  
14TWh gas sold

12.5TWh B2C – 14;3TWh B2B



## Italy: Edison

2.8m industrial, residential and SME commodity customers (2.97m commodity and Value-Added Services contracts (+37.9% vs.2023))

15.4TWh electricity sold (end customers) +11.9%

5.8bcm gas sold (residential and industrial uses) +12.1%

N.B. The customer portfolio consists of electricity, gas and recurring service contracts

# France: regulated activities (Enedis, Electricité de Strasbourg & island activities)

## Enedis

- The largest distribution grid in Europe and the main distribution grid in France connecting 95% of the metropolitan population with the monopoly on 356 concession contracts
- A regulated business model: Enedis' revenues has defined by the TURPE tariff
- €96bn net investments planned over the period 2023-2040 to support the energy transition dedicated to the resilience of the network and its development to new renewable capacity and EV charging capacity

(see p.77)

### Key figures:

- €4.5bn: EBITDA
- 38.8m customers (o/w 28.9m EDF)
- Net investments (€5.3bn in 2024)
- Headcount (~41k)
- 1.4m km electric network

(1) Fully consolidated data as of 31/12/2024.

## Island Activities

Integrated business model including generation, electricity purchases, distribution (via concessions) and supply at the regulated tariff

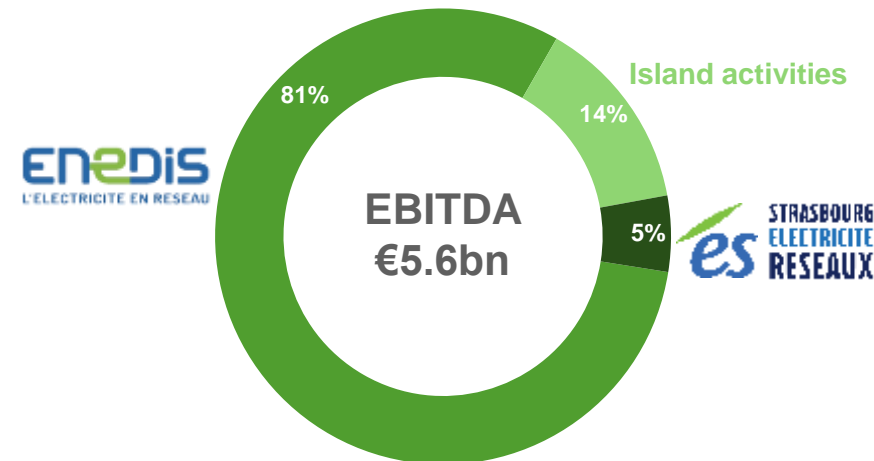
- Capacity 2.0GW<sup>(1)</sup> (fuel 78%, hydropower and other EnR 22%)
- Electricity generation 6.0TWh<sup>(1)</sup> (fuel 82%, hydropower and other EnR 18%)
- 1.3m of customers (electricity)
- Decarbonization of the fleet: start of work on the Ricanto liquid biomass power plant (130MW - France), replacing the Vazzio thermal power plant

(see p.82)

## Électricité de Strasbourg

- Electricity distribution (16,000km electric network)
- Energy supply to 0.58m customers (electricity) & 0.11m customers (gas and biogas), energy services, renewable energy generation

(see p.82)



# 2024 annual results





# 2024 financial results: stabilisation of the net financial debt

In billions of euros	2023	2024	Organic variation
Sales	139.7	118.7	-15.7%
<b>EBITDA</b>	<b>39.9</b>	<b>36.5</b>	-8.4%
<b>EBIT</b>	<b>13.2</b>	<b>18.3</b>	+43.0%
Net income excl. non-recurring items	18.5	15.2	-15.8%
<b>Net income - Group share</b>	<b>10.0</b>	<b>11.4</b>	+17.1%

## Net financial debt (NFD)

**€54.3bn**

vs €54.4bn at end-2023

## NFD / EBITDA ratio

**1.49x**

## Adjusted economic debt (AED)<sup>(1)</sup>

**€87.7bn**

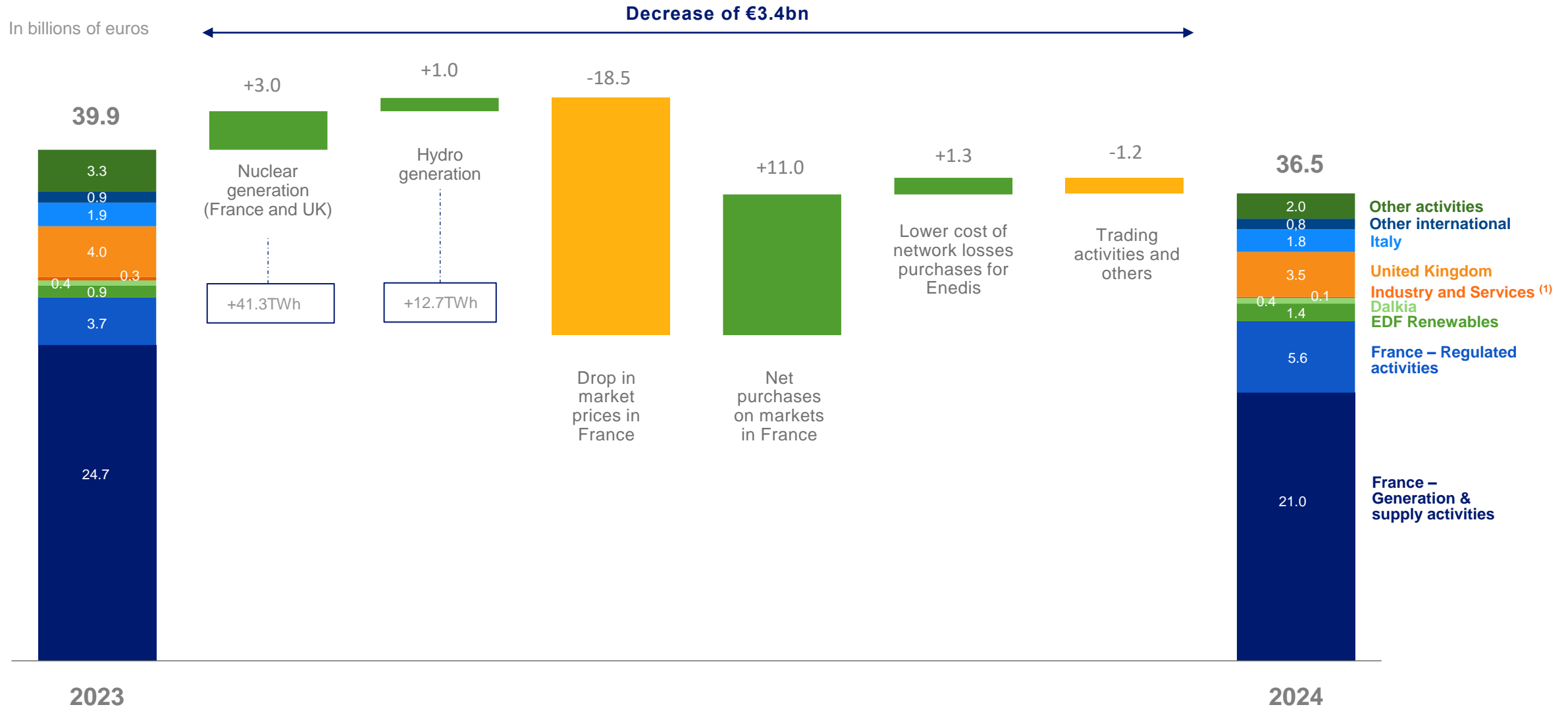
vs 86.3bn€ at end-2023

## AED / adjusted EBITDA ratio

**2.73x**

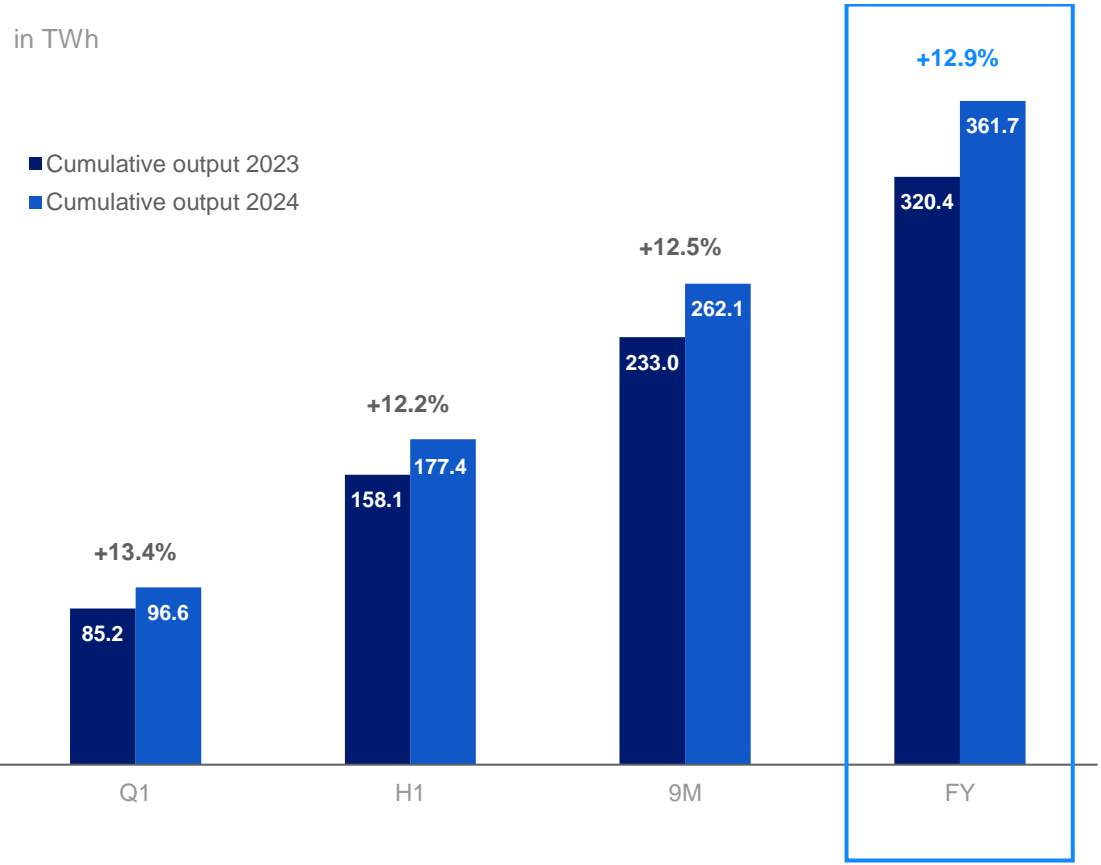


# EBITDA: excellent operational performance and effects of lower market prices



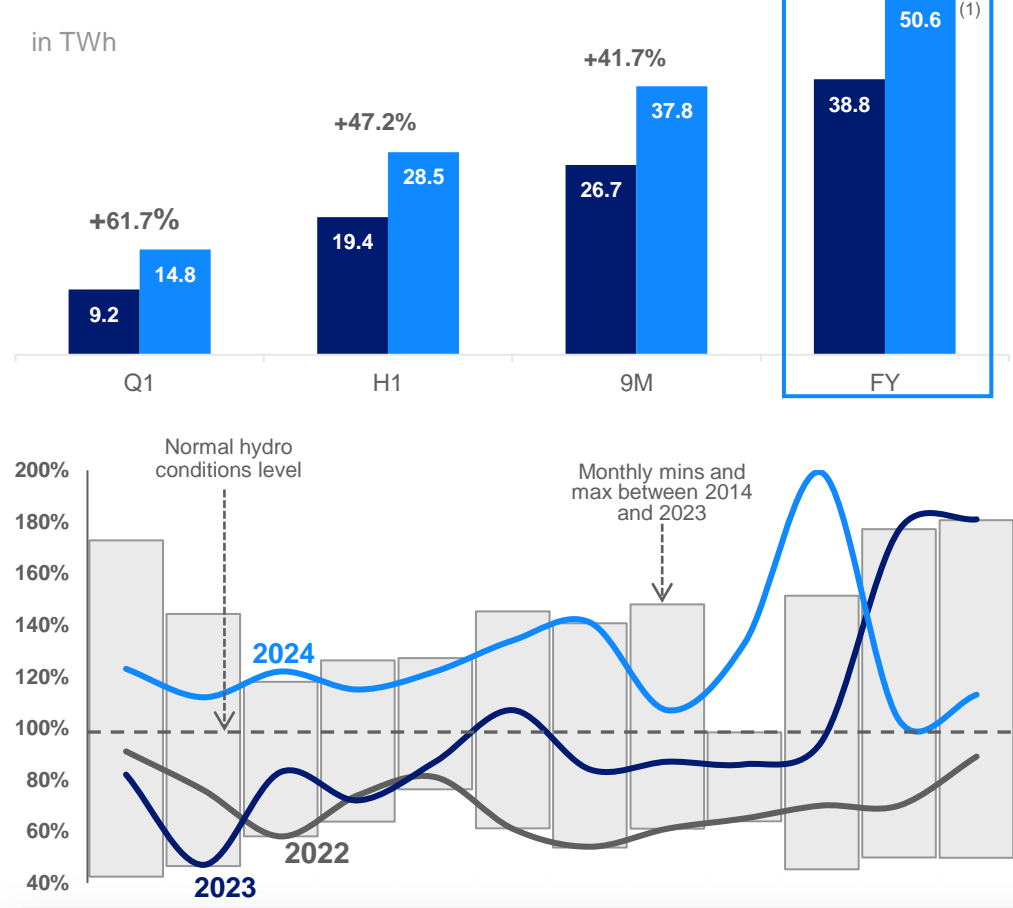
# Strong increase of the nuclear and hydro output in France

## Nuclear output



**+41.3TWh of nuclear output in France in 2024 vs 2023**, mainly thanks to optimised reactor outages under the START 2025 programme and industrial control of stress corrosion treatments

## Hydro output



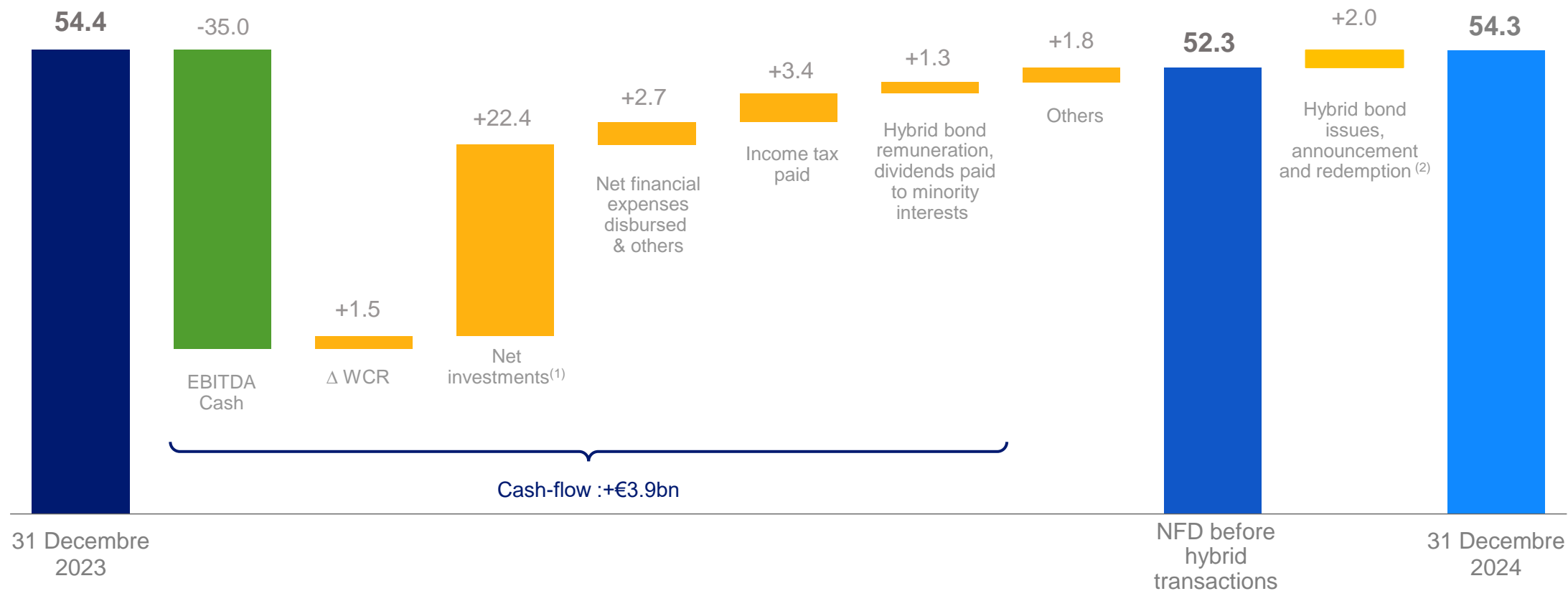
**+11.8TWh of hydro output in France in 2024 vs 2023**, particularly due to an outstanding hydraulicity



(1) Production after pumping deduction : 33.0TWh in 2023 / 42.9TWh in 2024

# Stabilisation of the net financial debt

In billions of euros

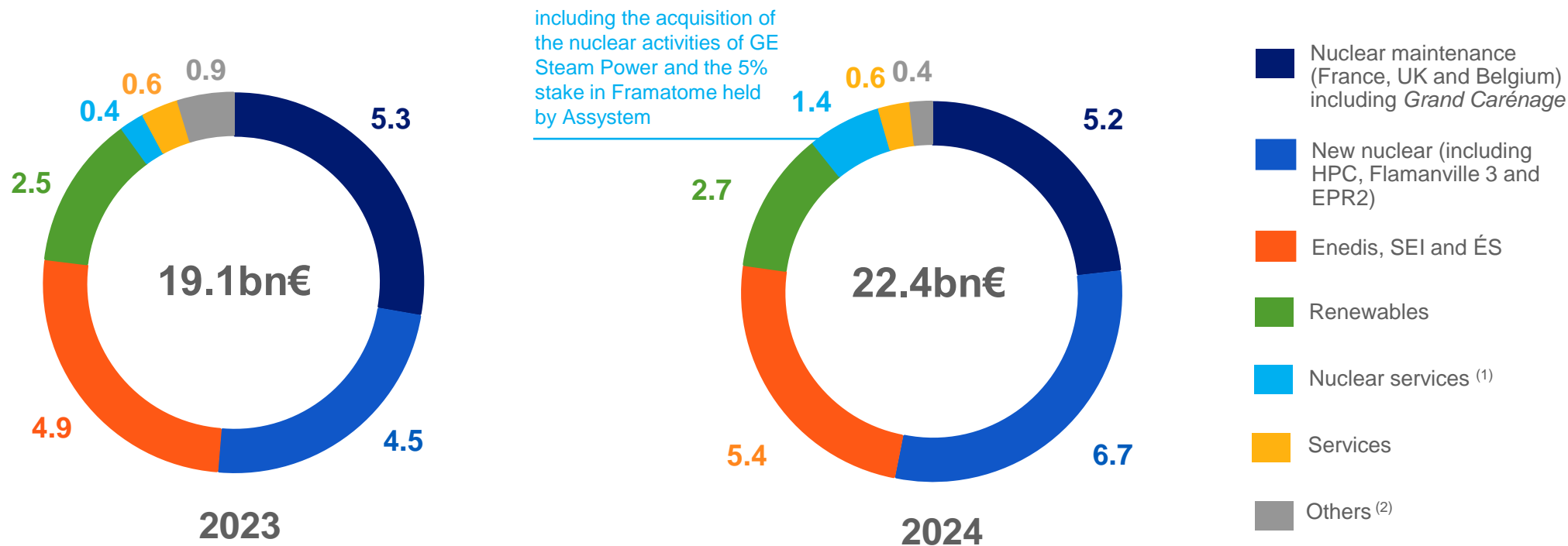


(1) Net investments excluding Group disposals.

(2) Announcement of redemption on 18 December 2024 of the hybrid bond issued in January 2013 for a nominal amount of €1.25bn reclassified from equity to other financial debts.

# Increase in net investments in coherence with the strategic objectives of the Group

In billions of euros



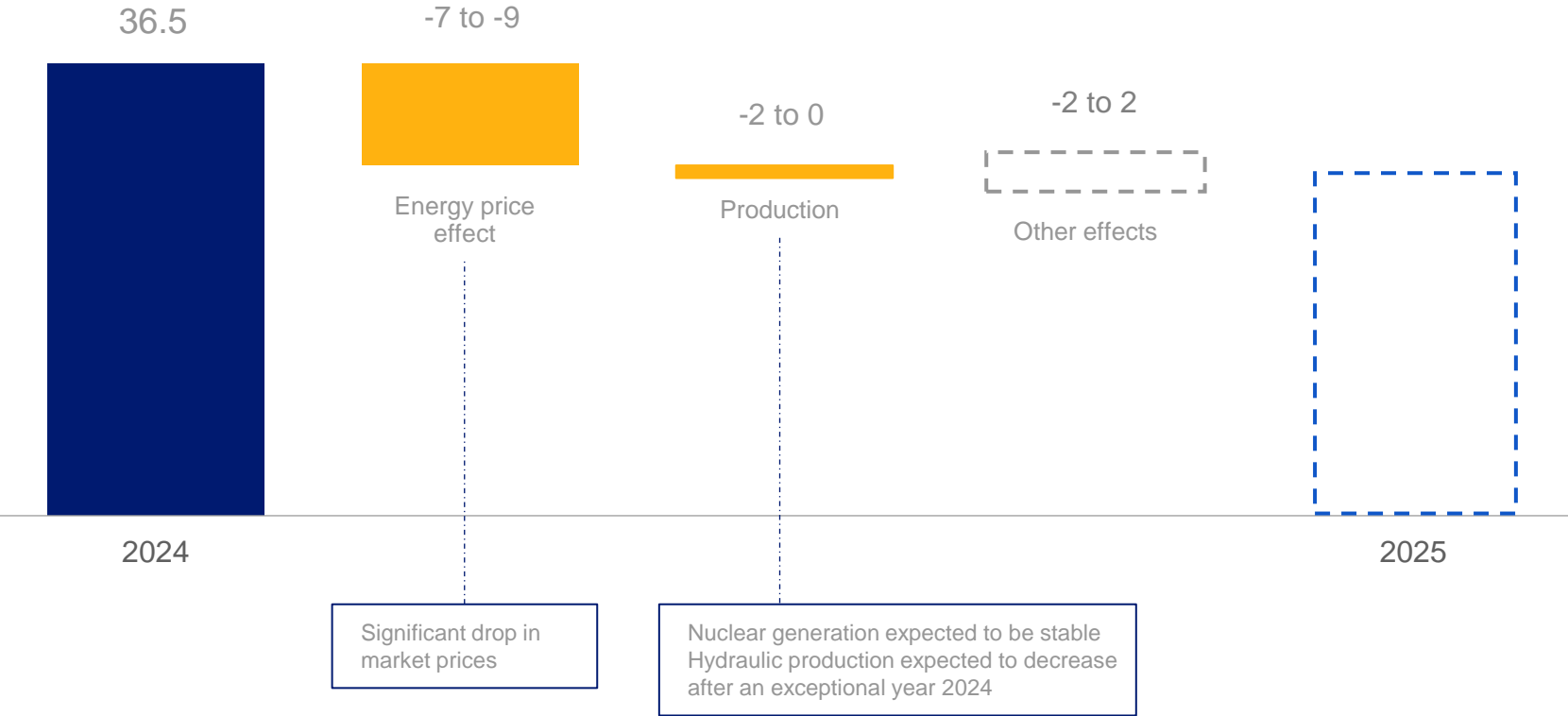
In 2024 almost 94% of the Group's investments are made in accordance with its net zero emission target

(1) Framatome and Arabelle Solutions since June 2024.

(2) Including central functions, property, gas and fuel.

# Projection of 2025 EBITDA

In billions of euros



# 2027 targets

**Net financial debt / EBITDA<sup>(1)</sup>**

**≤ 2.5x**

**Adjusted economic debt / Adjusted EBITDA<sup>(1)(2)</sup>**

**≤ 4x**

(1) Based on scope and exchange rates at 01/01/2025 and an assumption of French nuclear output including Flamanville 3 of 350-370TWh in 2025, 2026 and 2027

(2) As per current S&P methodology on the ratio.



# Financing and liquidity





# Stabilisation of the net financial debt

In millions of euros	31/12/2023	31/12/2024
Financial debt	86,647	81,802
Derivatives used to hedge debts	(1,379)	(1,872)
Cash and cash equivalents	(10,775)	(7,597)
Debt and equity securities (liquid assets)	(20,077)	(17,999)
Asset coverage derivatives	(35)	12
<b>Net financial debt<sup>(1)</sup></b>	<b>54,381<sup>(2)</sup></b>	<b>54,346<sup>(3)</sup></b>
<b>o/w green financial debt</b>	<b>9,322</b>	<b>19,802</b>

(1) After application of IFRS 16.

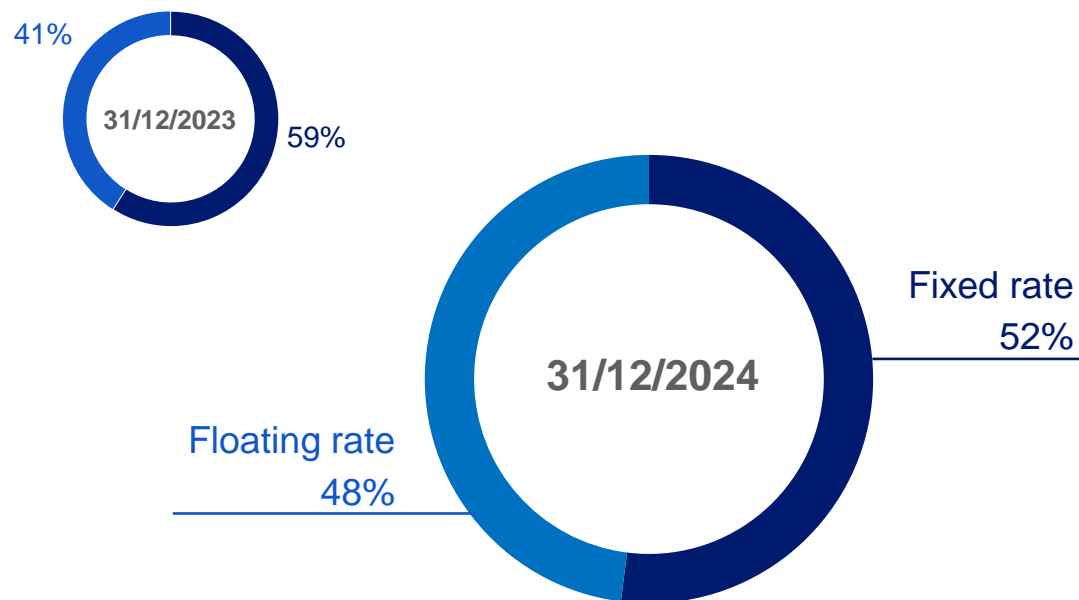
(2) Including €539M (\$596M) hybrid notes announced to be redeemed on 22/01/2024 (see press release of 14/12/2023).

(3) Including €1,250M hybrid notes announced to be redeemed on 29/01/2025 (see press release of 18/12/2024)

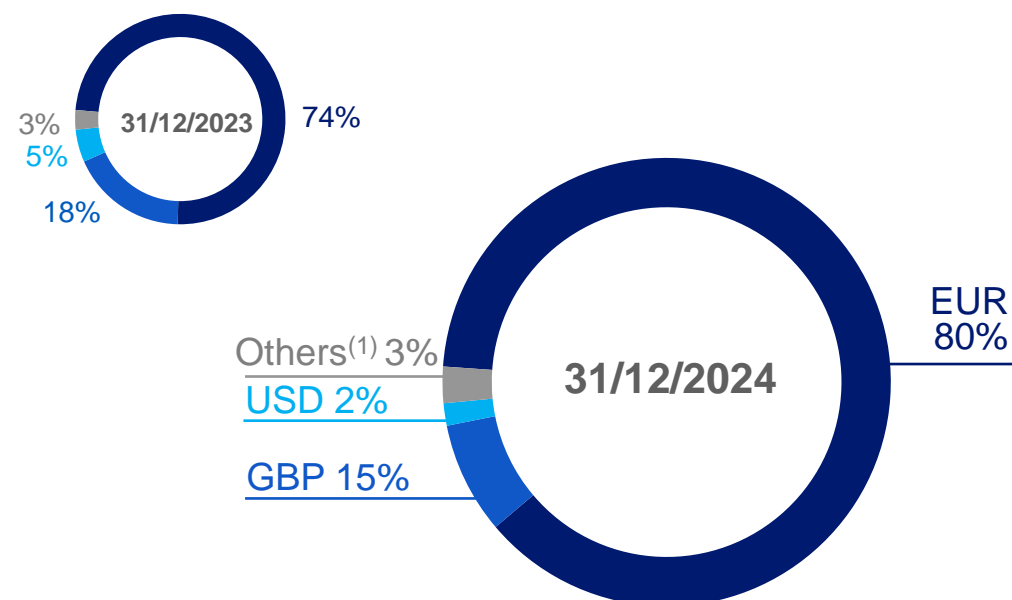
# Gross debt

	31/12/2023	31/12/2024	Δ
• Average maturity of gross debt	11.0 years	<b>13.0 years</b>	+2.0 years
• Average coupon	4.11%	<b>3.85%</b>	-0.26%

Breakdown by type of rate after swaps



Breakdown by currency after swaps



(1) Mainly JPY, CAD, CHF and BRL.

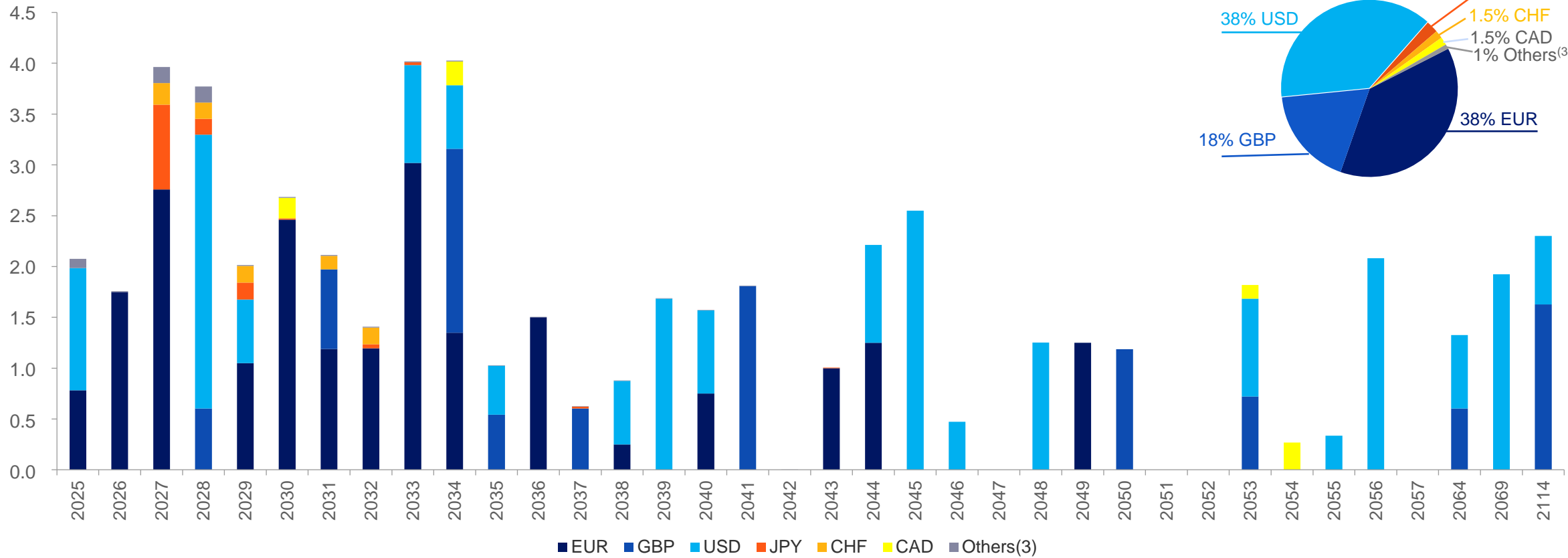
# High level of liquidity

In billions of euros	31/12/2023	31/12/2024
Cash and cash equivalents	10.8	7.6
Liquid assets	20.1	18.0
Unused credit lines (off-balance sheet)	15.8	14.3
<b>Gross liquidity</b>	<b>46.7</b>	<b>39.9</b>
Financial debt – current part (maturing within one year)	(18.9)	(12.9)
<b>Net liquidity</b>	<b>27.8</b>	<b>27.0</b>

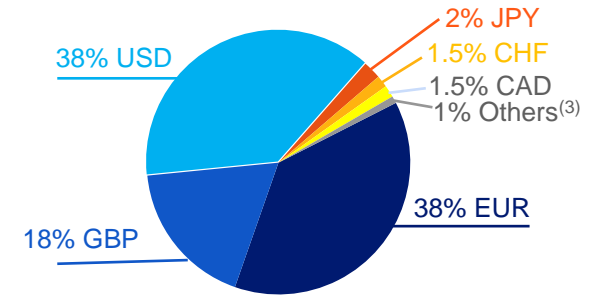
# Focus on bonds<sup>(1)</sup>

## Repayments by currency

In billions of euros, before swaps



## Stock of bonds as of 31/12/2024: €56.9bn<sup>(2)</sup>



(1) Nominal amounts only.

(2) €56.9bn vs €54.1bn in note 18 of the 2024 consolidated financial statement that includes accrued interests and depreciation.

(3) Mainly HKD, NOK and BRL.

# Green financing: allocation of the proceeds

Issue date	Instrument	Maturity	Nominal amount	New renewable capacities	Investments in hydro facilities	Biodiversity projects	Distribution of electricity projects <sup>(1)</sup>	Existing French nuclear reactors <sup>(2)</sup>
Nov. 2013	Bond	7.5Y	1,400M€	1,400	-	-	-	-
Oct. 2015	Bond	10Y	1,250M\$	1,250	-	-	-	-
Oct. 2016	Bond	10Y	1,750M€	1,248	502	-	-	-
Jan. 2017	Bond	12Y–15Y	26,000M¥	14,021	11,979	-	-	-
Sept. 2020	Bond	4Y	2,400M€	2,421	110	28	-	-
Nov. 2021	Bond	12Y	1,850M€	1,594	189	23	-	-
Oct. 2022	Bond	12	1,250M€	-	-	-	1,250	-
Jul-2023	REPO	Evergreen	565M€	-	-	-	565	-
Aug-2023	Bond	4Y–8Y	325MCHF	-	-	-	325	-
Nov. 2023	Bond	3.5Y	1,000M€	-	-	-	-	1,000
May-July 2024	Bank loans	3Y-5Y	6,185M€	-	-	-	-	6,185
2024	NeuCP <sup>(3)</sup>	5,5M	412M€	36	371	5	-	-
Jun. 2024	Bond	7Y - 12Y - 20Y	3,000M€	750	-	-	97 <sup>(4)</sup>	1,000
Sept. 2024	Bond	5Y-8Y	310MCHF	310	-	-	-	-
Sept. 2024	Hybrid bond	NC5-NC8	1,150M€	-	-	-	-	1,150
Sept. 2024	Hybrid bond	NC11	500M£	-	-	-	-	500

(1) Connection of renewable capacity & of smart meters, new grid lines built.

(2) In relation to their lifetime extension

(3) Allocation of the maximum amount issued during 2024

(4) 97M€ have financed 2023 Enedis capex, the 1,153M€ remaining are invested in SRI funds at end-2024

# Green financing: proceeds allocation and impact reporting

Technology	Total amount (in EUR eq.)	Total net <sup>(1)</sup> capacity of financed projects (in MW)	Expected net <sup>(1)</sup> avoided CO <sub>2</sub> emissions (in Mt/year)
<b>Onshore wind projects</b>	4,751	3,587	4.31
<b>Offshore wind projects</b>	1,227	399	0.58
<b>Solar projects</b>	2,953	2,602	1.75
<b>Hydro facilities</b>	1,245	1,599	0.0
Incl. biodiversity projects	56	N/A	-
<b>Nuclear: Existing French nuclear reactors in relation to their lifetime extension</b>	9,927	N/A	6.05

Technology	Total amount (in EUR)	Renewable capacity connected (in MW)	VE charging station connected	New grid lines built (in km)
<b>Distribution of electricity projects <sup>(2)</sup></b>	2,210	12,419	32,126	5,907

The detailed list of EDF Renewables projects and hydraulic investment operations by category will be published in EDF 2024 URD.

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

(2) Impact reporting based on KPIs of Enedis on 2021 to 2023

# Focus on hybrids securities

## Hybrid bond issues

Hybrid bond issues contribute to strengthening the balance sheet through their qualification as equity under IFRS and 50/50 as debt and equity by rating agencies

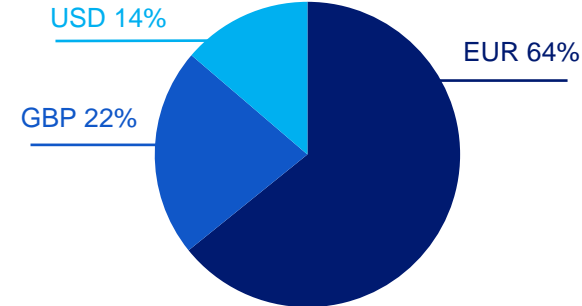
EDF has exercised its option to redeem the hybrid notes issued on 4 October 2018 for a nominal amount of €1,250m on 5 July 2024. The equity content resulting from the conversion of the Oceane bonds in 2023 was used to avoid refinancing half of its nominal amount<sup>(1)</sup>

On 18 December 2024, EDF announced its intention to exercise its option to redeem the hybrid notes issued on 29 January 2013 for a nominal amount of €1,250m and to use the equity content resulting from the conversion of the Oceane bonds in 2023 to avoid having to refinance half of the nominal amount<sup>(2)</sup>.

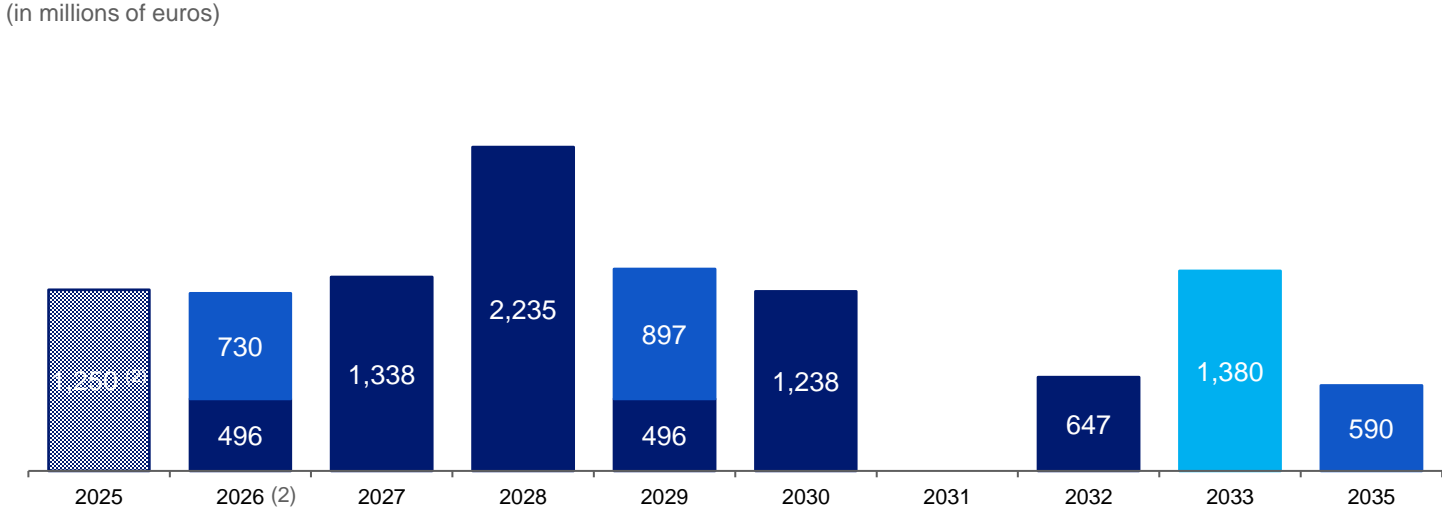
## Hybrid securities stock at 31 December 2024

Total amount: €10.0bn<sup>(1)</sup>  
 Average tenor: 4.87 years  
 Average cost: 5.38%

### Hybrids stock breakdown by currency







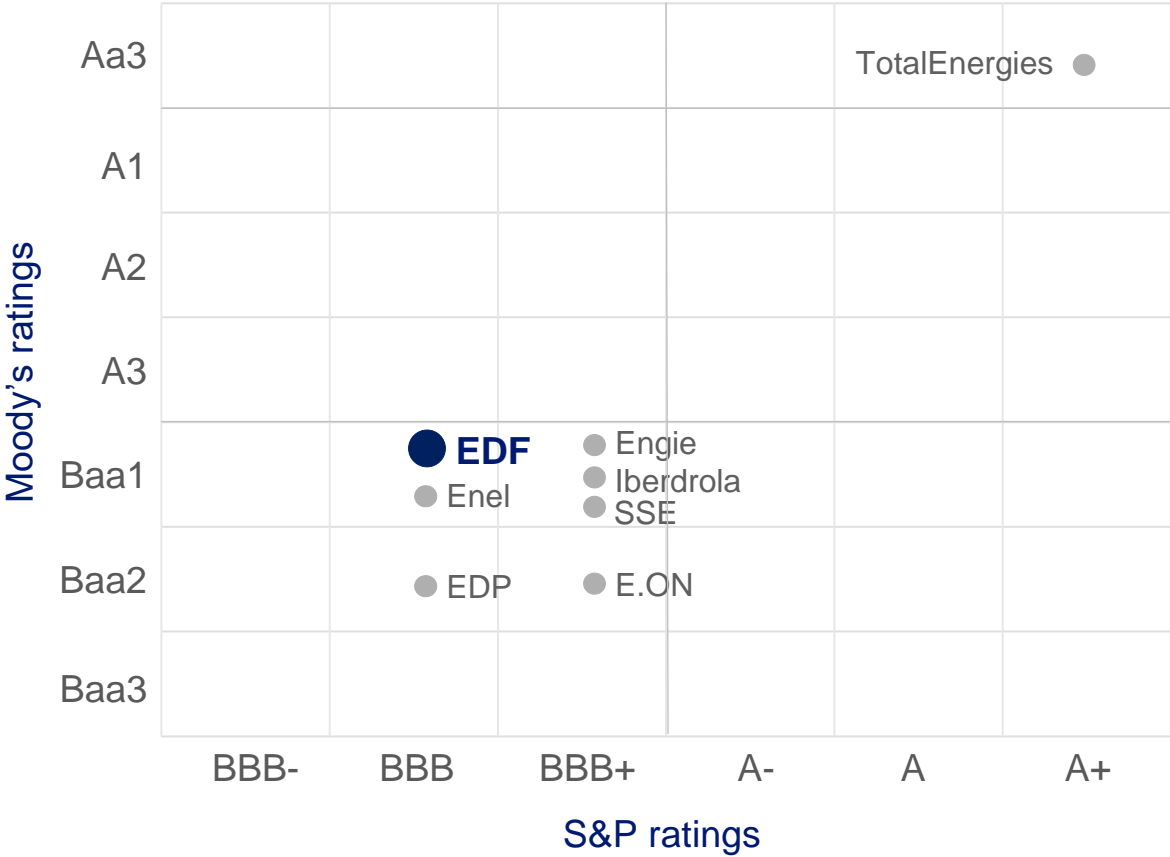
### Hybrid debt maturity schedule based on first call date



(1) Exchange rate as of transaction time  
 (2) See press release on 18 December 2024.

# Comparative credit ratings<sup>(1)</sup>

Rating Agency		Latest changes
	<b>BBB</b> <i>Positive</i>	5 June 2024 <b>Outlook revised to Positive from Stable</b>
	<b>Baa1</b> <i>Stable</i>	1 June 2023 <b>Outlook revised to Stable from Negative</b> <i>(confirmed on 16 December 2024)</i>
	<b>BBB+</b> <i>Negative</i>	28 October 2024 <b>Outlook revised to Negative from Stable</b>



Sources: rating agencies as of 20/02/2025.

(1) See [EDF's ratings](#)





# Appendices



# Electricity output

*Fully consolidated entities*

<i>(in TWh)</i>	<b>2023</b>		<b>2024</b>	
Nuclear	363.4	78%	404.2	78%
Total Renewables	70.8	15%	86.1	17%
<i>Hydro<sup>(1)</sup></i>	42.8	60%	55.5	64%
<i>Wind</i>	23.5	33%	23.7	28%
<i>Solar</i>	3.2	5%	4.8	6%
<i>Biomass</i>	1.4	2%	2.2	3%
Gas	28.5	6%	25.6	5%
Fuel oil	4.6	1%	4.1	0.8%
Coal	0.2	0.05%	0.2	0.04%
<b>Group</b>	<b>467.6</b>	<b>100%</b>	<b>520.3</b>	<b>100%</b>

(1) Hydro output includes tidal energy for 519GWh in 2024 and 504GWh in 2023. Production after deduction of pumped volumes is 47.8TWh in 2024 and 37.0TWh in 2023.

# CO<sub>2</sub> emissions and carbon intensity<sup>(1)</sup>

*Fully consolidated entities*

Heat and power generation by segment	Emissions (in kt CO <sub>2</sub> )				Carbon intensity (in gCO <sub>2</sub> /kWh <sup>(4)</sup> )	
	2023		2024		2023	2024
France – Generation and supply activities	2,901	16%	1,315	8%	8	3
France – Regulated activities <sup>(2)</sup>	2,917	16%	2,792	17%	469	453
Dalkia	3,588	20%	3,188	20%	147	135
United Kingdom	4	0%	0	0%	0	0
Italy	6,263	34%	6,053	38%	302	262
Other international	2,547	14%	2,714	17%	182	198
<b>Group<sup>(3)</sup></b>	<b>18,249</b>	<b>100%</b>	<b>16,096</b>	<b>100%</b>	<b>37</b>	<b>30</b>

(1) Including direct CO<sub>2</sub> emissions (excluding life cycle analysis of fuel, production means and other CO<sub>2</sub>-equivalent gas emissions). The other CO<sub>2</sub>-equivalent gas emissions are included in the scope 1 calculation.

(2) Power generation in non-interconnected zones corresponding to overseas departments and Corsica - (mainly island territories) and Electricité de Strasbourg (ES).

(3) Framatome and Arabelle Solutions contribute to 33ktCO<sub>2</sub> in 2024 and 29ktCO<sub>2</sub> in 2023, The direct CO<sub>2</sub> emissions from “Other activities” segment are not significant compared to Group total emissions and are not disclosed in this table.

(4) Carbon intensity corresponds to CO<sub>2</sub> emissions in relation to the Group's electricity and heat generation. The EDF Group's heat generation amounts to 23.8TWh in 2024 (vs 23.7TWh in 2023).

# Installed capacity at end-2024

<i>(in GW)</i>	<b>Total net capacity of EDF Group, including shares in associates and joint ventures</b>	<b>Consolidated capacity of EDF Group</b>	
Nuclear <sup>(1)</sup>	67.8	67.9	57%
Hydro <sup>(2)</sup>	22.7	21.6	18%
Other renewables <sup>(3)</sup>	16.8	13.3	11%
Gas	11.6	11.8	10%
Fuel oil	3.2	3.1	3%
Coal	3.0	1.2	1%
<b>Total</b>	<b>125.0</b>	<b>118.8</b>	<b>100%</b>

(1) This capacity does not include the EPR reactor of Flamanville 3

(2) Including sea energy: 0.24GW in 2024.

(3) Including wind, solar, biomass and geothermal.

# Renewables: installed capacity and capacity under construction

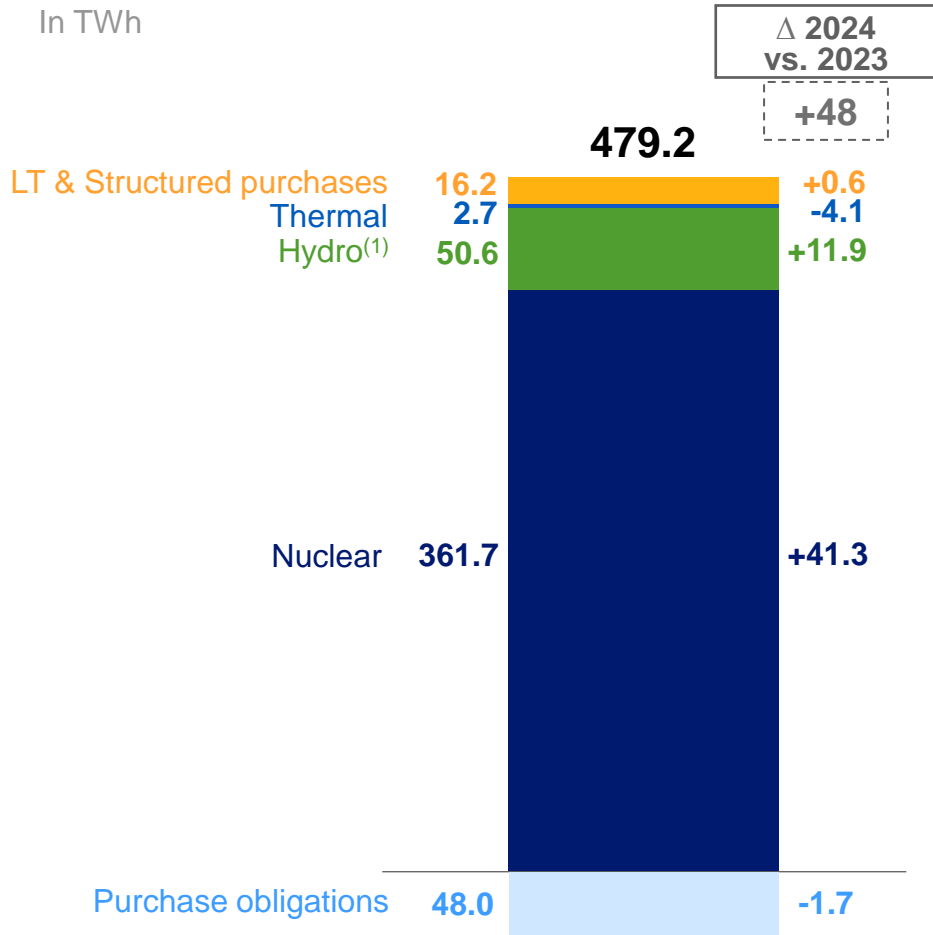
<i>(in MW)</i>	<b>Gross<sup>(1)</sup></b>		<b>Net<sup>(2)</sup></b>	
	<b>31/12/2023</b>	<b>31/12/2024</b>	<b>31/12/2023</b>	<b>31/12/2024</b>
Wind	2,685	2,538	1,591	1,528
Solar	3,728	6,039	2,617	2,595
<b>Capacity under construction</b>	<b>6,413</b>	<b>8,577</b>	<b>4,209</b>	<b>4,123</b>
Onshore wind	13,244	13,169	9,342	9,404
Offshore wind	1,621	2,148	581	807
Solar	9,425	11,444	4,734	6,066
<b>Wind &amp; Solar installed capacity</b>	<b>24,289</b>	<b>26,762</b>	<b>14,657</b>	<b>16,277</b>
Biomass and geothermal	-	-	440	481
<b>Renewable (excl. hydro) installed capacity</b>	<b>-</b>	<b>-</b>	<b>15,097</b>	<b>16,758</b>
Hydro	-	-	22,571	22,740
<b>Renewable installed capacity</b>	<b>-</b>	<b>-</b>	<b>37,668</b>	<b>39,498</b>

(1) Gross capacity: total capacity of the facilities in which EDF has a stake.

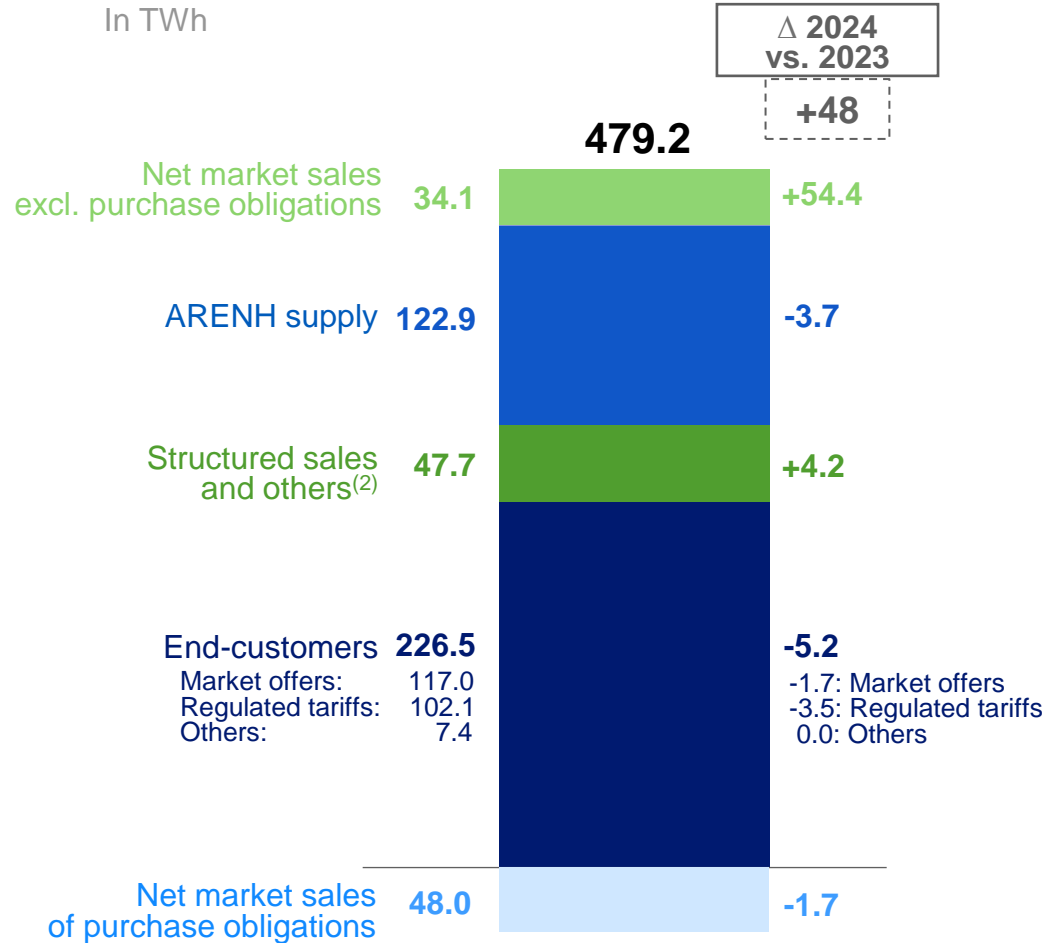
(2) Net capacity: capacity corresponding to EDF's stake.

# France: upstream / downstream electricity balance

## OUTPUT / PURCHASE



## CONSUMPTION / SALES



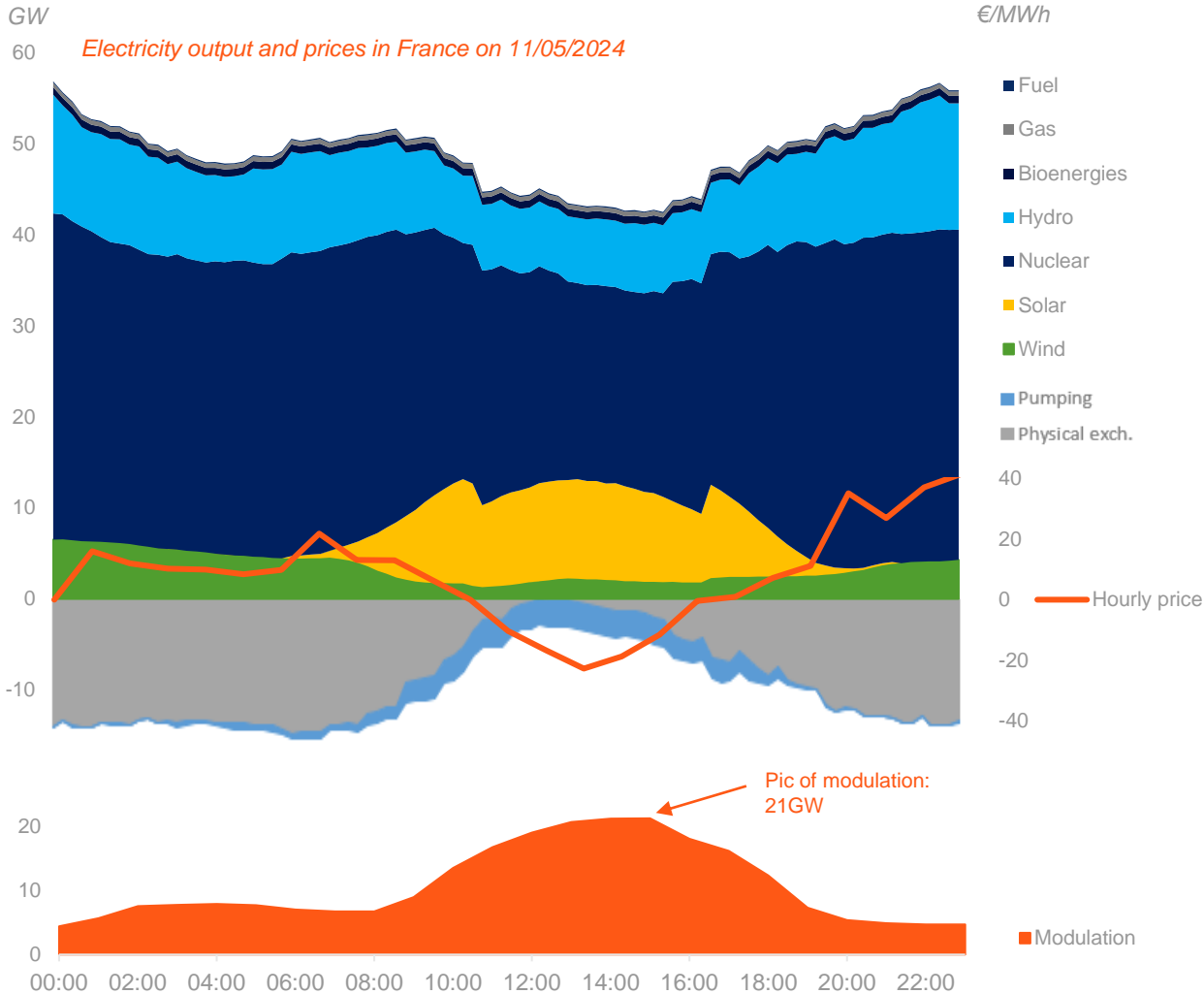
NB: EDF excluding French islands electrical activities.

(1) Hydro output after deduction of pumped volumes represents 42.9TWh in 2024 / 33.0TWh in 2023.

(2) Including hydro pumped volumes of 7.7TWh in 2024 / 5.7TWh in 2023.

# Developing flexibility solutions to meet the needs of the power system

## Need of development of flexibility to cope with the system instability



Renewable energy intermittency entails:

- high price volatility: in 2024, **1,366 hours**, i.e. **more than 15%** of the time with **hourly prices < 10 €/MWh** (vs 500 hours, i.e. more than 5% in 2023)
- **high system instability** through the day which leads to **modulation of nuclear**: for instance, **22 reactors have modulated on 11/05/2024**

## Progression in flexibility offers for customers

**+18% vs end-2023**, i.e. **2.1GW** of capacity in flexibility offers to customers in the G4 countries <sup>(1)</sup>

## Decarbonisation of flexible thermal plants

Start of the works at the **Ricanto liquid biomass plant** (130MW – France), to replace the Vazzio thermal plant

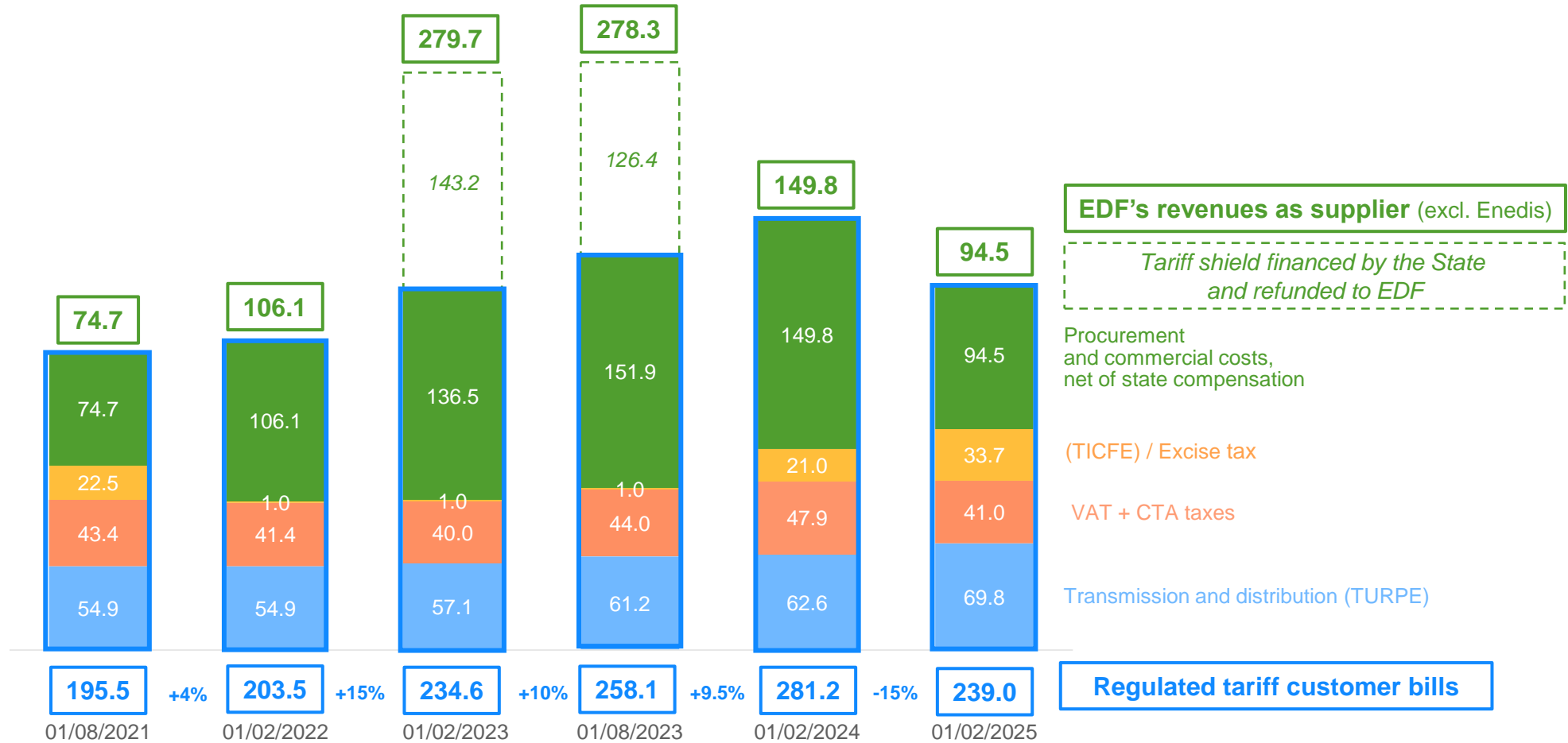
Inauguration of the **Presenzano CCG plant** (800MW - Italy) with 30% lower CO<sub>2</sub> emissions, and a turbine ready to run on hydrogen



# Change in regulated sales tariffs in France

Composition of the average bill including VAT <sup>(1)</sup>

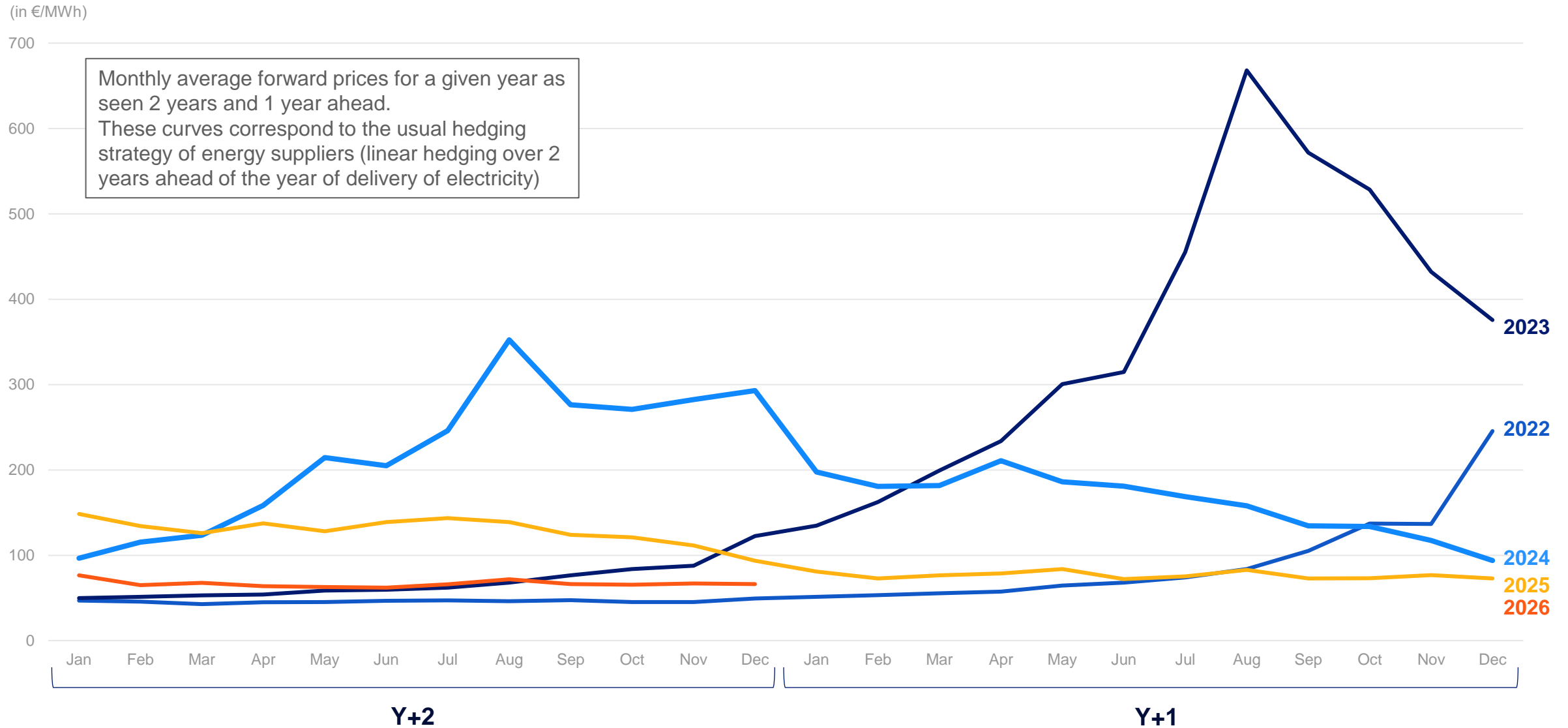
(in €/MWh)



(1) Due to rounding, the total is not strictly equal to the sum of the components.

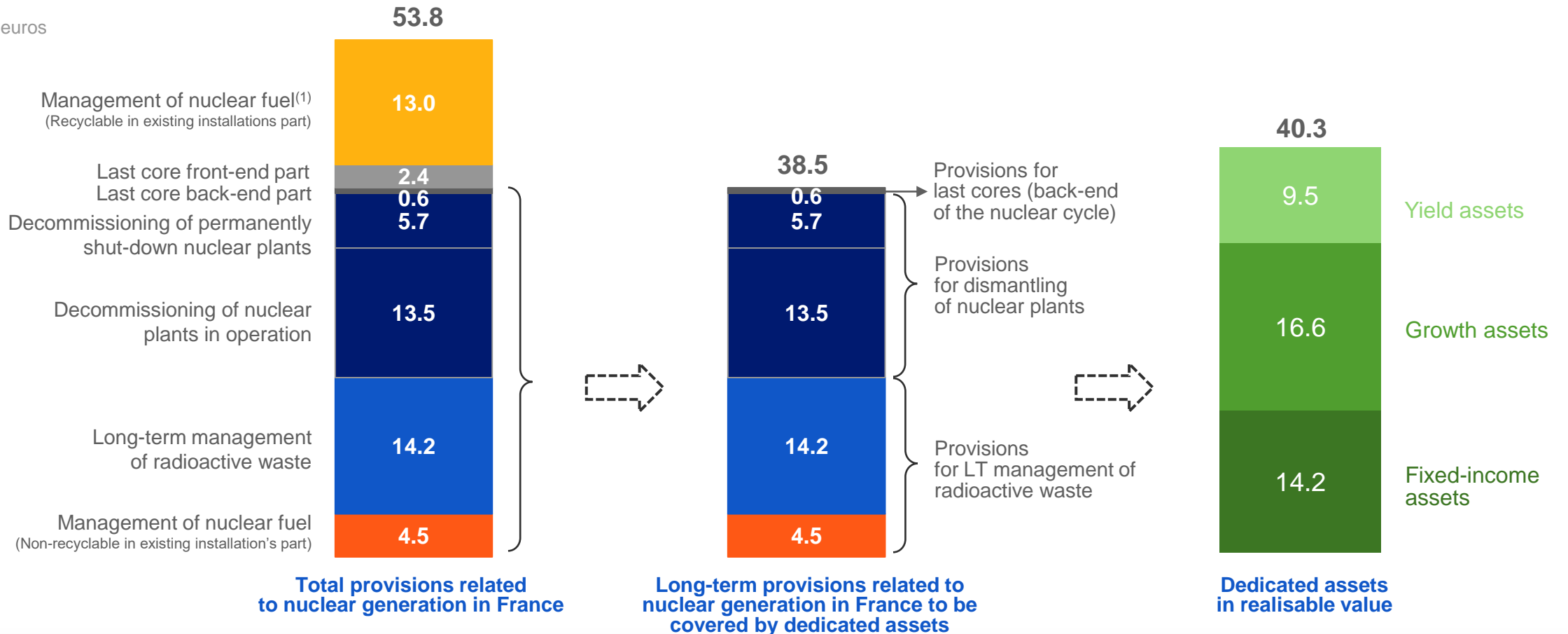


# Y+2 & Y+1 electricity forward prices in France for delivery years 2022 to 2026



# Provisions related to nuclear generation in France and part to be covered by dedicated assets

In billions of euros

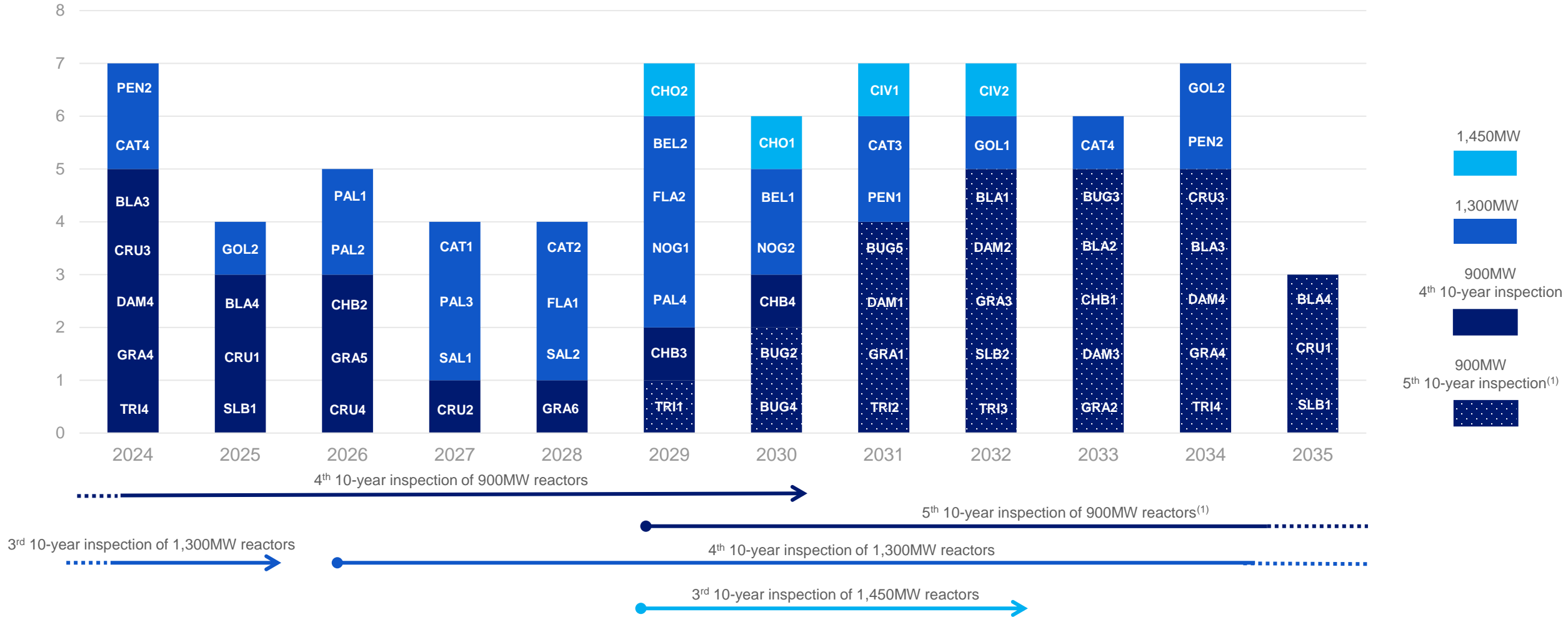


(1) Related to the operating cycle.

- At 31 December 2024, the regulatory coverage is **104,7%** (vs 108.5% at 31 December 2023)
- No allocation to dedicated assets to be made in 2025 in respect of 2024 owing to a coverage rate of over 100% at end of year, in accordance with the regulation

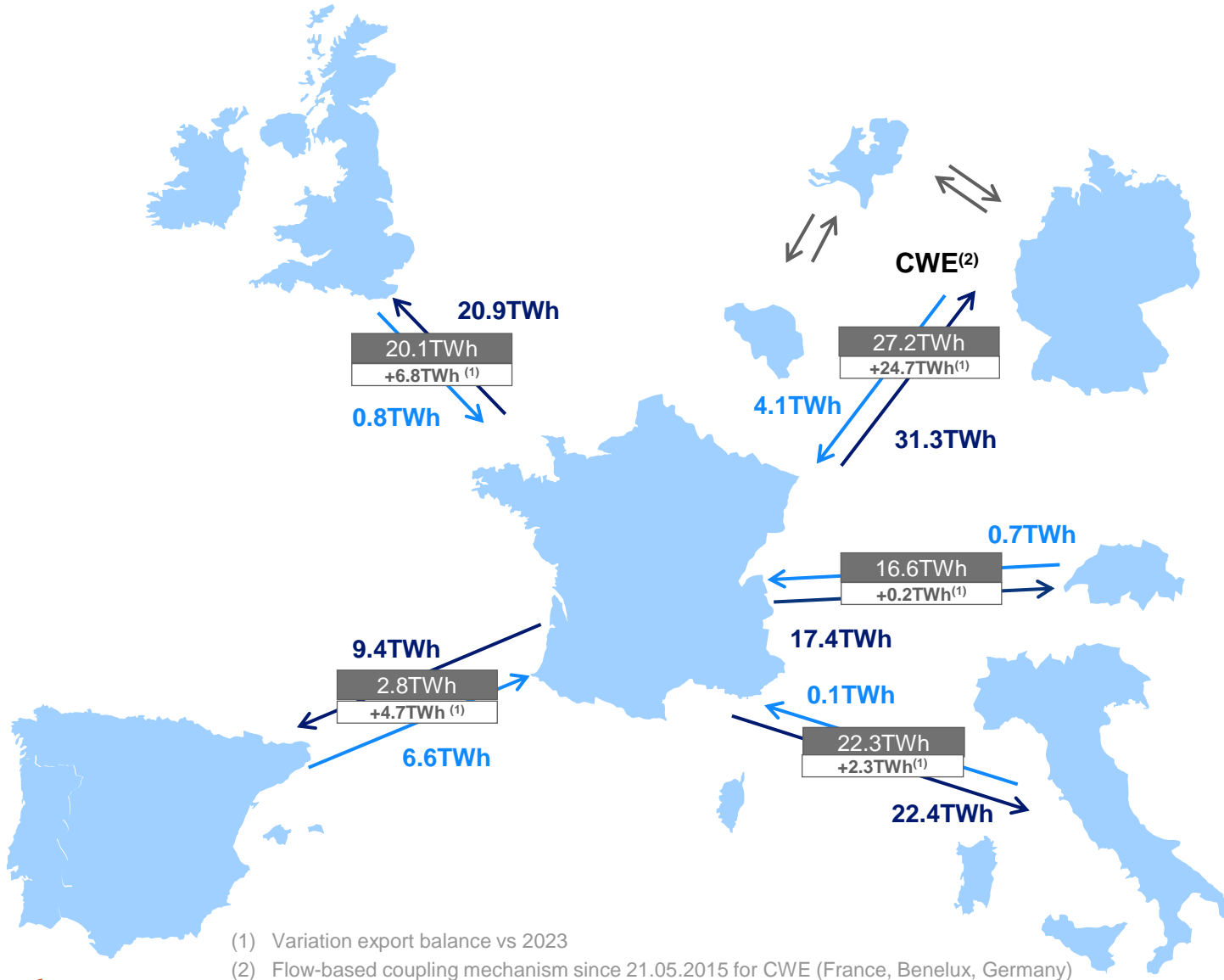
# 10-year inspections of the nuclear fleet in France

Number of 10-year inspections



In 2029, Tricastin 1 would be the first 900MW series reactor to realise its 5<sup>th</sup> 10-year inspection

# France export balance in 2024



**Export balance France: 89.0TWh**  
 (balance in 2023: 50.3TWh)

**Exports: 101.2TWh** (74.8TWh in 2023)  
**Imports: 12.2TWh** (24.5TWh in 2023)

The rise in electricity generation to 536.5TWh and the level in demand at 437.2TWh led to higher exports (+35% vs 2023) and lower imports (-50% vs 2023)

NB: Data extracted the 02/01/2025 – source: RTE.