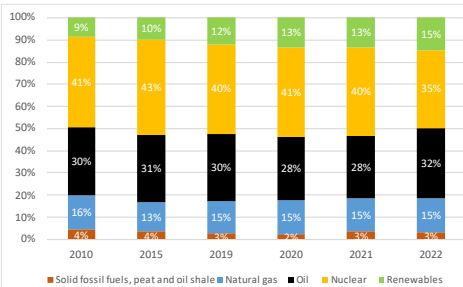


# REPowerEU Two Years on France

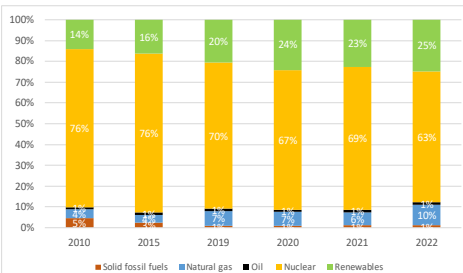
## Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



Source: Eurostat

## Save energy

### 1. KEY ENERGY SAVINGS MEASURES

France is implementing energy efficiency measures to contribute to energy security further, such as:

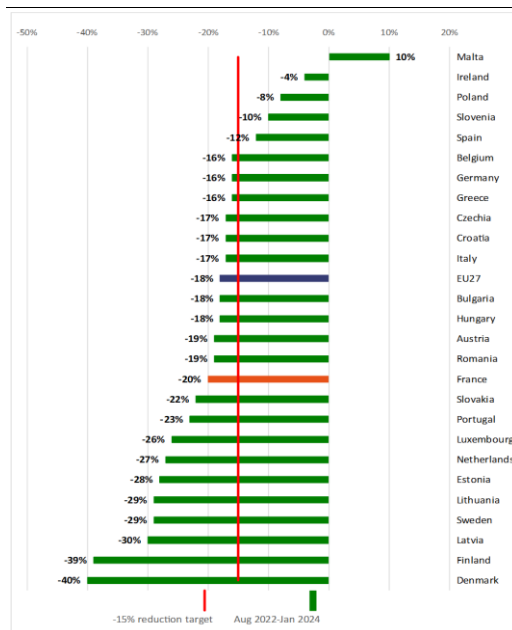
- **“Plan de sobriété énergétique”** launched in October 2022 aiming at reducing energy consumption by 10% over the next two years compared to 2019. The plan aims at consuming less energy and improve energy efficiency in households.

- As regards buildings, continuation of the implementation of the **national Long-term Renovation Strategy**.
- The fast deployment of the **‘MaPrimeRénov’** support scheme helped more than 700 000 households in their energy renovation work. However, most support consisted in single measures and global renovations only represent a minor share of the interventions.
- For the 2022-2025 period, France increased the level of obligation for the **white certificate scheme** by 25%, reaching 1970 TWh.
- Furthermore, the implementation of the 2021 **Climate and Resilience Law** strengthened building codes, labelling and the application of energy audits for businesses and introduced minimum energy performance standards (renting prohibition of the energy worst-performing building, “G+” Class, as from 2023).

## 2. GAS DEMAND REDUCTION

France has reduced its gas consumption by **20%** in the period **August 2022 – January 2024**, above the decrease achieved at EU level (18%) and the 15% voluntary gas demand reduction agreed at the EU level <sup>(1)</sup>.

Graph 3: **Natural gas demand reduction (August 2022 – January 2024)**



(1) Cyprus does not use natural gas

Source: Eurostat, DG ENER calculations

## Diversify energy supplies

### 1. KEY ACTIONS

Due to its nuclear plants, some renewables and high level of electrification, France has a relatively low reliance on fossil fuels in its electricity mix <sup>(2)</sup>, which limited its energy imports dependency. In 2021, gas accounted for 15% of the energy mix and 6% of its electricity mix and was fully imported.

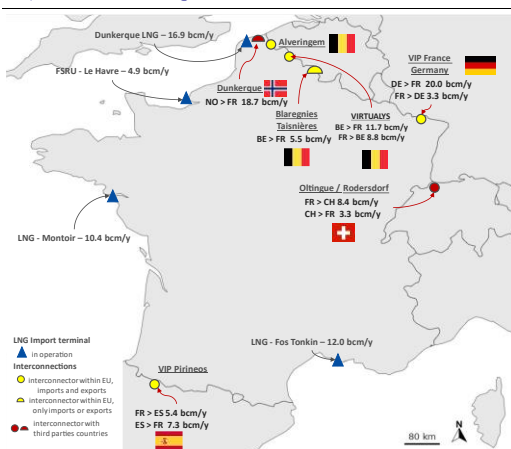
<sup>(1)</sup> Council Regulation (EU) 2023/706 of 30 March 2023, amending Regulation (EU) 2022/1369

<sup>(2)</sup> France's share of fossil fuels in its electricity mix in 2023 was 8.4 % (compared to 33% at EU level), while its share of nuclear was 65% and of renewables 26.3%.

## 2. GAS INFRASTRUCTURE DEVELOPMENTS

France has traditionally had a diversified supplier portfolio including, to a limited extent, Russia. It has significant LNG import capacity with its 4 terminals, in Dunkerque, Montoir-de-Bretagne, two in Fos-sur-Mer and, since 2023, one floating storage and regasification unit (FSRU) in Le Havre. France is also directly connected to Norwegian gas fields in the North Sea with the Franpipe pipeline, and to that country's oversized gas storage capacity.

Map 1: **Cross-border gas infrastructure**



Source: European Commission map recreation (based on ENTSO- G)

### 3. GAS STORAGE

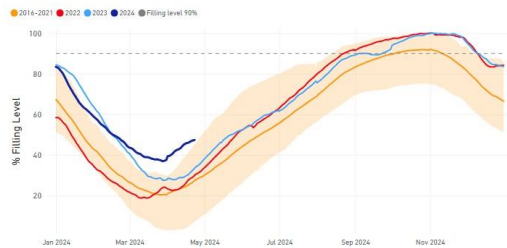
France has fourteen storage facilities with a total capacity of 11.2 bcm <sup>(3)</sup>, representing 30% of its annual gas consumption in 2022.

France fulfilled its gas storage obligations last winter, reaching 99.8% by 1 November 2023 <sup>(4)</sup>, and ended the winter season with a storage filled at 39.31% by 1 April 2024.

<sup>(3)</sup> Saint-Illiers, Beynes Supérieur, Beynes Profond, Gournay-sur-Aronde, Chéméry, Céré-la-Ronde, Soings-en-Sologne, Trois Fontaines l'Abbaye, Cerville, Germigny-sous-Coulombs, Saint-Clair-sur-Epte are managed by Storengy and VGS Lussagnet and Izaute are managed by Teréga.

<sup>(4)</sup> Regulation (EU) 2022/1032 of the European Parliament and of the Council of 29 June 2022 amending Regulations (EU) 2017/1938 and (EC) No 715/2009 with regard to gas storage.

Graph 4: Storage levels in France



Source: JRC calculation based on AGSI+ Transparency Platform, 2024

#### 4. NUCLEAR FUEL DIVERSIFICATION

Although EDF has shown itself not being in any significant way dependent on Russian uranium or services, EDF is dependent on Russia for recycling its spent nuclear fuel (uranium), since certain steps of the recycling process currently can only be carried out in Russia. However, over the last few years France has taken steps to further strengthen European enrichment capacities by launching projects/initiatives to extend its own capacities through the extension of the Georges Besse II enrichment plant.

### Energy platform

- In the **four EU tenders** for joint gas purchase organised **under AggregateEU in 2023**, 113 companies across the EU expressed gas demand of over 54 bcm. 48 suppliers replied with bids of more than 61 bcm, resulting in **over 42 bcm of demand matched**.
- In the **first mid-term tender of 2024**, 19 companies expressed 34 bcm of gas demand for the next 5 years, with **97.4 bcm offered by suppliers**.
- According to the indicative data obtained through AggregateEU, companies from **France** aggregated gas demand of **1.37 bcm** in 2023 under the EU Energy Platform. This represents the equivalent of 3.63% of the country's yearly gas consumption.

(5) International Renewable Energy Agency (2024). Renewable capacity statistics 2024

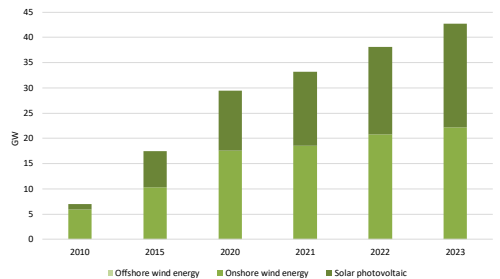
## Produce clean energy

### 1. INSTALLED RENEWABLE ELECTRICITY CAPACITY, IN WIND AND SOLAR

In **2023**, France installed around 4.6 GW of renewable electricity capacity, bringing the total to **69.3 GW** (vs. 59.7 GW in 2021).

In **2023**, the annual growth rate of installed renewables power capacity rose to **7.1%** compared to 6.9% in 2021<sup>(5)</sup>.

Graph 5: Installed solar and wind power capacity (in GW)



(1) The renewable power capacity data reflects the capacity installed and connected at the end of the calendar year.

(2) In 2023, France installed 1.4 GW of wind power capacity (vs. 1 GW in 2021).

(3) In 2023, France installed 3.2 GW of solar photovoltaic capacity (vs. 2.7 GW in 2021).

Source: IRENA, Renewable capacity statistics, 2024

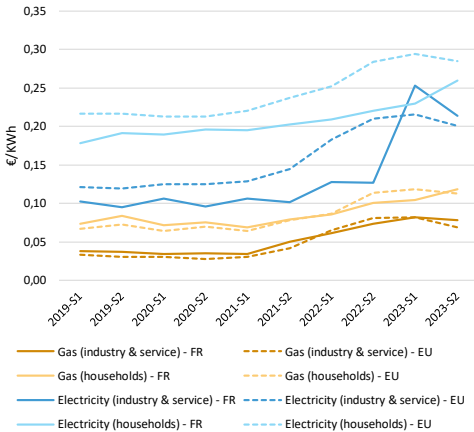
### 2. ELECTRICITY INFRASTRUCTURE DEPLOYMENT

**France needs further investment in its electricity grids to (i) allow the electrification of new consumption sectors that still rely on fossil fuels and (ii) integrate increasing volumes of renewable energy, even in the scenarios that see a resurgence of nuclear power.** France's electricity interconnectivity, measured as a country's import capacity over its installed generation capacity, stood at 5.6% in 2022 and 5.0% in 2023 and is expected to reach 5.6% in 2024. Interconnection availability increased by 1 GW from 2022 to 2023, but solar generation capacity also increased. An additional electricity interconnector with Italy became operational in 2022 and construction is ongoing for interconnectors with Ireland and Spain. France is also investing in grid connections for offshore wind parks (approx. EUR 700 million in 2022 and 2023)<sup>(6)</sup>.

(6) Six offshore radial connections have recently received project of common interest (PCI) status in the new list of PCIs and projects of mutual interest (PMIs) in November 2023.

## Energy price developments

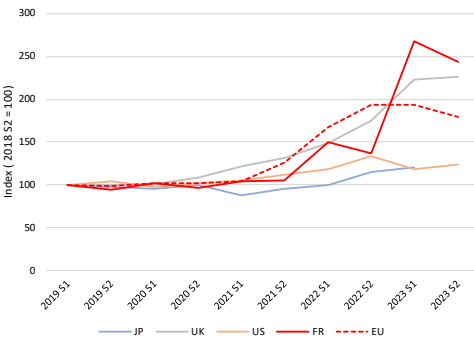
Graph 6: **France's energy retail prices for households and industry & service**



- (1) For industry, consumption bands are I3 for gas and IC for electricity, which refer to medium-sized consumers and provide an insight into affordability
- (2) For households, the consumption bands are D2 for gas and DC for electricity
- (3) Industry prices are shown without VAT and other recoverable taxes/levies/fees as non-household consumers are usually able to recover VAT and some other taxes

Source: Eurostat

Graph 7: **Trends in electricity prices for non-household consumers (EU and foreign partners)**



- (1) For Eurostat data (EU and FR), the band consumption is ID referring to large-sized consumers with an annual consumption of between 2 000 MWh and 20 000 MWh, such as in electricity intensive manufacturing sectors, and gives an insight into international competitiveness
- (2) JP = Japan

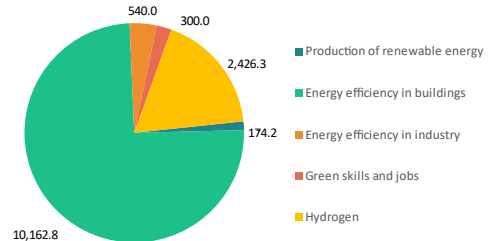
Source: Eurostat, IEA

## Smartly combine investments and reforms in the RRP

### Amended Recovery and Resilience Plan (RRP), including a REPowerEU chapter:

- Approved by Council: on 14 July 2023
- Total amount: EUR 40.3 billion
- Amount allocated for energy EUR 13.6 billion
- Climate tagging: RRP: 49.5 %; REPowerEU chapter: 91.6 %

Graph 8: **Energy-related investments in the RRP (in EUR million)**



Source: European Commission

### Tangible results: reforms & investments

- **Energy efficiency for households:** EUR 3.1 billion to support the energy renovation of 1 750 000 households and EUR 500 million for 40 000 social housing units.
- **Energy efficiency for public buildings:** thermal renovation of over 6 750 public sites, of over 28 million square metres of State-owned public buildings and of over 680 schools with an objective of achieving at least 30% of energy savings on average.
- **Hydrogen:** support to the production and use of decarbonised hydrogen including the installation of an electrolyser with a production capacity amounting to 140MW per year.
- **Energy efficiency in industry:** energy renovation of 5000 Very Small Enterprises /SMEs as well as fossil-free industry projects jointly achieving an expected reduction of fossil energy consumption of 250 GWh of primary energy per year.
- **Renewables:** Entry into force of the Law on the acceleration of renewable energy production in 2023.

## Highlights of the National Energy and Climate Plan

- The **draft updated NECP** was submitted to the European Commission in November 2023.
- Member States are due to submit their **final updated NECP by 30 June 2024**, taking into account the Commission recommendations.
- For more information see the dedicated [webpage of the European Commission on the NECPs](#).

## Strengthening competitiveness with the Net Zero Industry Act

France has a strong manufacturing base in low-carbon technologies and components (including hydrogen and nuclear), and is expected to expand it to other decarbonised generation technologies, in particular new offshore windfarms. France is among the leading worldwide exporters of nuclear technologies in Europe. The French recovery and resilience plan focuses heavily on hydrogen, and France is one of the world's top hydrogen providers. France is well positioned in the field of hydrogen, with industry leaders in hydrolysis and fuel cell technologies. There are French companies among the biggest European manufacturers of nuclear equipment and smart meters. There are also major French players in the batteries field, with as many as four gigafactories planned in France. In October 2021, France announced the 'France 2030', a EUR 54 billion investment plan for 2030. This targets French industrial development in the energy, automotive and space sectors, including EUR 8 billion earmarked for energy technology investment in the decarbonisation of industry, in hydrogen and in small modular reactors, and EUR 4 billion for electric and plug-in hybrid vehicles.

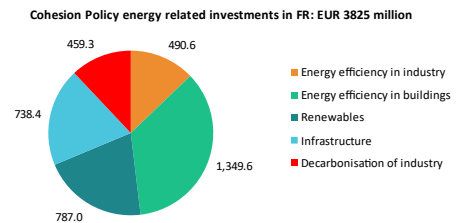
## Other EU initiatives

Cohesion Policy provides significant support to REPowerEU in all EU MS, with a total of EUR 89 billion worth of investments focusing on regions most in need in the energy transition.

Most resources concentrate on energy efficiency in the buildings sector (i.e. 720 000 dwellings across the EU will be renovated and public buildings will decrease their energy consumption by

6000 GWh/year) and on energy infrastructure (i.e. 4.9 GWh of additional electricity storage deployed), followed by renewables (e.g. 9.5 GW of additional renewable energy capacities installed).

Graph 9: **2021-2027 energy-related investments in the Cohesion Funds supporting REPowerEU**



Source: Cohesion Open Data <sup>(7)</sup>

<sup>(7)</sup> <https://cohesiondata.ec.europa.eu/d/hgyj-gyin>