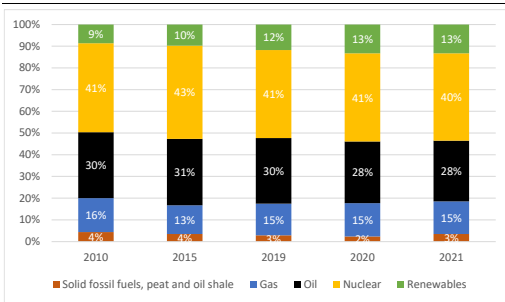


State of the Energy Union 2023 France

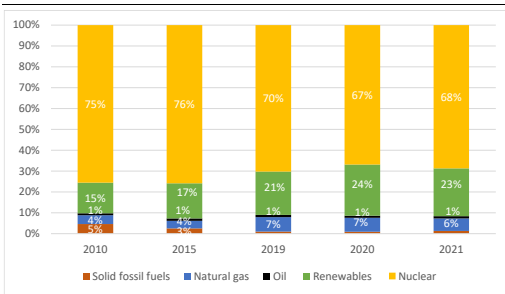
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



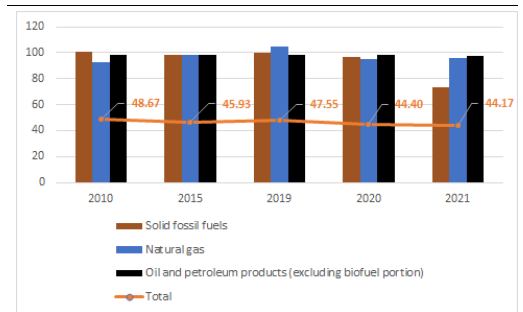
Source: Eurostat

- In France, the composition of the energy mix and its relative distribution among energy sources has not changed in the last decade. The **share of fossil fuels in France's energy mix has been around half of its energy mix**, reaching 47% in 2021.
- The share of nuclear in the energy mix has been stable at 40% since 2016 and **renewable sources** have been **slightly increasing from 8% in 2011 to 13% in 2021**. France's high share of nuclear energy together with renewables play a central role in decarbonising its energy system.

Security, solidarity and trust

1. DIVERSIFICATION OF ENERGY SOURCES AND REDUCTION OF IMPORT DEPENDENCY

Graph 3: Import dependency on fossil fuels



(1) In percentages

(2) Combustible renewables and electricity are excluded

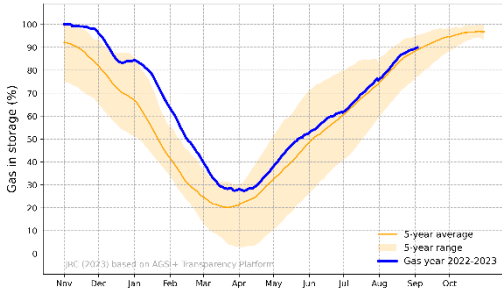
(3) The total amount takes into consideration the energy mix of the country

Source: Eurostat

- France is **dependent** on imported fossil fuels in general. This makes its economy particularly sensitive to global price developments, requiring it to step up efforts on the energy transition.
- In 2022, its electricity production **was severely affected by low nuclear and hydro output**, meaning that France became a net importer for the first time since at least 1980.

2. FLEXIBILITY OF THE ENERGY SYSTEM

Graph 4: Gas storage levels



Source: JRC calculation based on AGSI+ Transparency Platform, 2023

- France has **14 gas storage facilities** with a total capacity of **132 TWh**.
- On 16 October, the country's storage capacity was filled to **97.93%**.

Integrated internal energy market

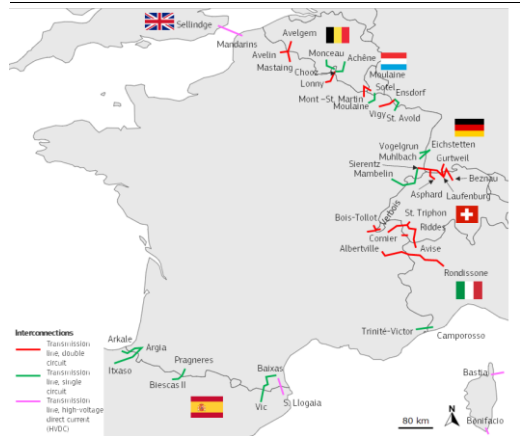
1. ELECTRICITY INTERCONNECTIVITY

2023	2030 target
4.97%	At least 15%

Source: DG ENER's own calculation based on ENTSO-E

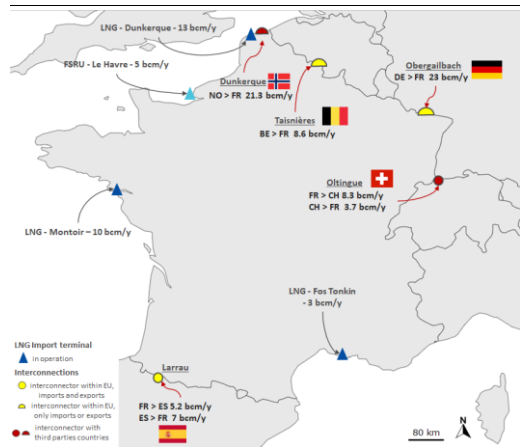
2. ENERGY TRANSMISSION INFRASTRUCTURE

Map 1: Cross-border electricity interconnections



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

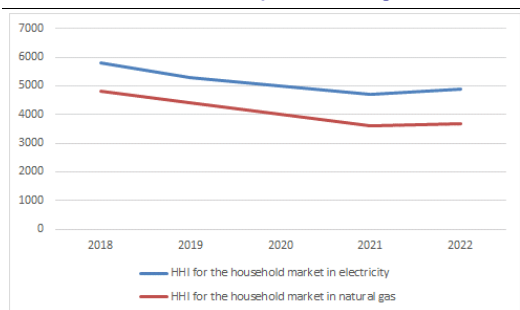
Map 2: Cross-border gas interconnections



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

3. MARKET INTEGRATION

Graph 5: Index of concentration (HHI) for the household markets in electricity and natural gas



Source: CEER 2023 out of ACER's Energy Retail and Consumer Protection 2023 Market Monitoring Report

- In 2022, in France the market share of the three largest suppliers reached 93% for electricity, and 88.9% for natural gas.

Rollout of electricity smart meters

- France has a high electricity smart meter rollout, with 92% of household consumers being equipped with smart meters in 2022.⁽¹⁾

4. ENERGY POVERTY AND JUST TRANSITION

Table 1: Energy poverty

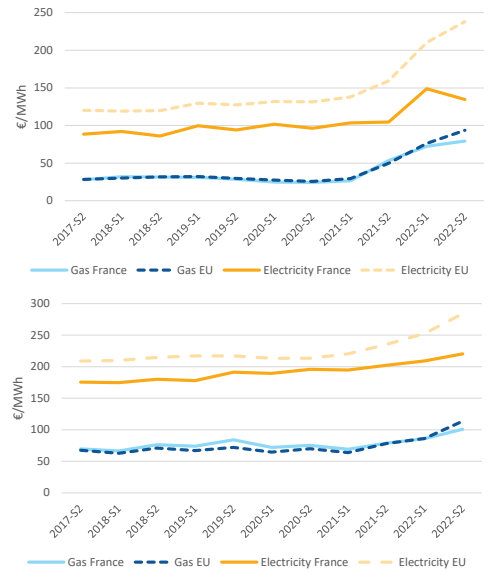
	France			EU		
	2020	2021	2022	2020	2021	2022
Arrears on utility bills (households %)	5.5%	7.1%	7.1%	6.5%	6.4%	6.9%
Inability to keep home adequately warm (household %)	6.7%	6.0%	10.9%	7.5%	6.9%	9.3%
Population living in dwelling with presence of lead, damp and rot (population %)	18.0%	-	-	14.8%	-	-

Source: Eurostat

- **Just transition plan:** The French Territorial Just Transition Plans (TJTP) delineate the transformation of fossil fuel and heavy industry sectors in 10 regions across the six departments. These plans detail how the Just Transition Fund (JTF), endowed with a national allocation of 1.02€ billion, will aid in mitigating the impacts of sectoral transformations, steering towards a carbon-neutral economy. The commitment to phase out coal is set for 2024.

5. ENERGY PRICES

Graph 6: Energy retail prices for industry (top) and households (bottom)



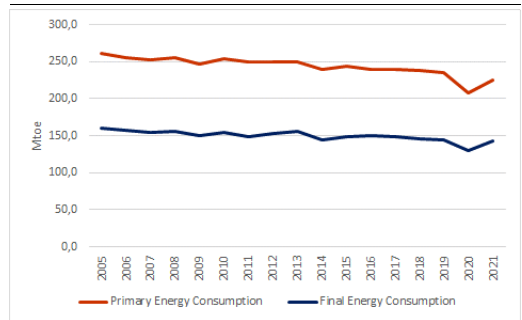
- (1) On electricity, the band consumption is for DC households and ID for industry
- (2) On gas, the band consumption is D2 for households and I4 for industry

Source: Eurostat

Energy efficiency

1. ENERGY EFFICIENCY

Graph 7: Primary and final energy consumption



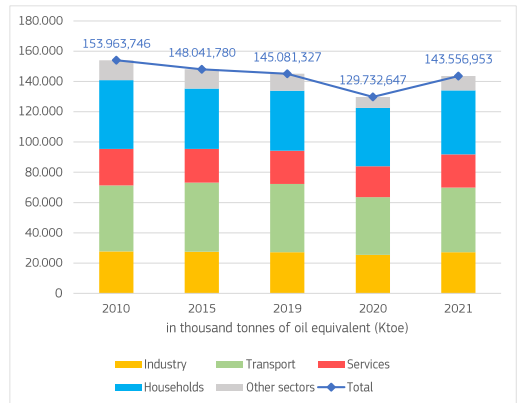
Source: Eurostat

- In 2021, France's **Primary Energy Consumption (PEC)** amounted to 224.76 Mtoe, 4.4% lower than in 2019, while

⁽¹⁾ ACER, CEER. Energy Retail and Consumer Protection, 2023 Market Monitoring Report

its **Final Energy Consumption (FEC)** amounted to 143.56 Mtoe, 1.1% lower than in 2019, despite the COVID-19 crisis recovery.

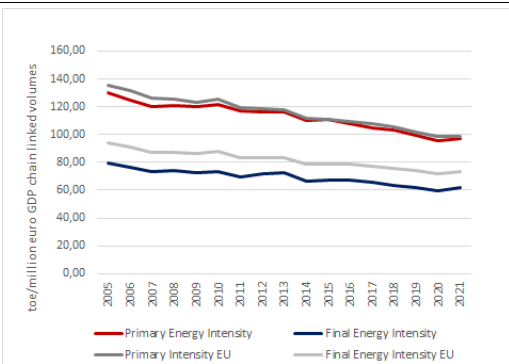
Graph 8: **Final energy consumption by sector**



(1) Final Energy Consumption excludes consumption of the energy sector (including transformation and distribution losses) and non-energy use of energy carriers.

Source: Eurostat

Graph 9: **Primary and final energy intensity**



Source: Eurostat

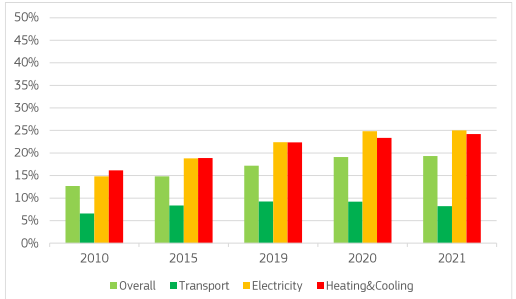
2. ENERGY SAVINGS IN BUILDINGS

- In 2020 there were **35.4 million** of **dwelling**s in **France**.
- As per its 2020 Long Term Renovation Strategy (LTRS), **France** targets to achieve **-22%** of energy savings **by 2030** compared to **2015** in the building sector.
- In 2021, the final energy consumption of residential buildings **decreased by 0.81%** compared to 2019.
- The sales of heat pumps amounted to **621.776 units** in 2022 representing an increase of **16%** compared to 2021, as per the European Heat Pump Association (EHPA).

Decarbonisation and climate action

1. SECTORAL SHARE OF RENEWABLE ENERGY

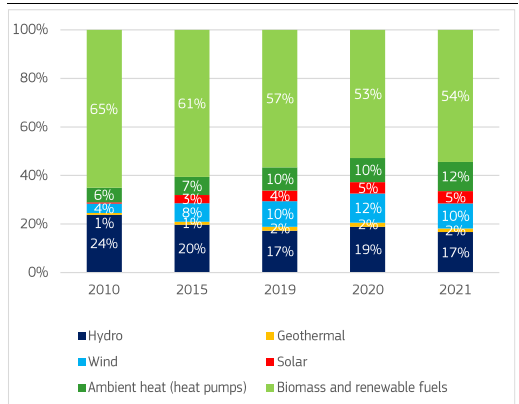
Graph 10: **Share of renewable energy sources**



(1) In % of gross final consumption of energy

Source: Eurostat

Graph 11: **Renewable energy mix**

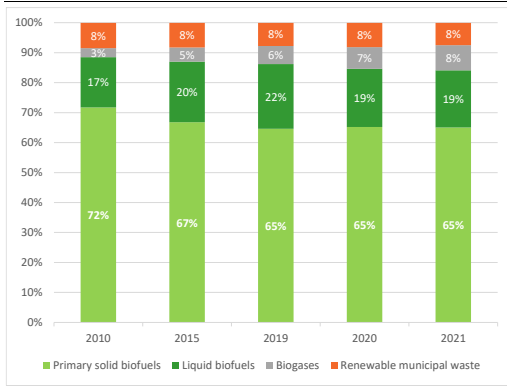


(1) In % of gross final consumption of energy

Source: Eurostat

2. BIOENERGY DEMAND

Graph 12: Bioenergy mix

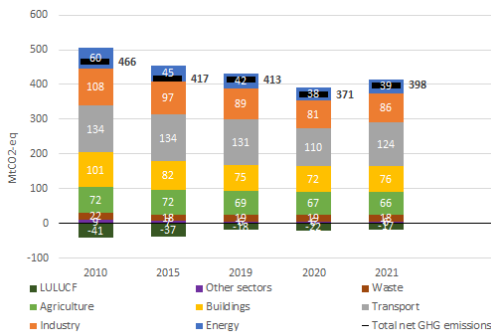


(1) Composition of bioenergy, in % of gross inland consumption of energy

Source: Eurostat

3. GREENHOUSE GAS EMISSIONS

Graph 13: Greenhouse gas emissions by sector



(1) Energy sector refers to electricity and heat production and petroleum refining.

(2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use.

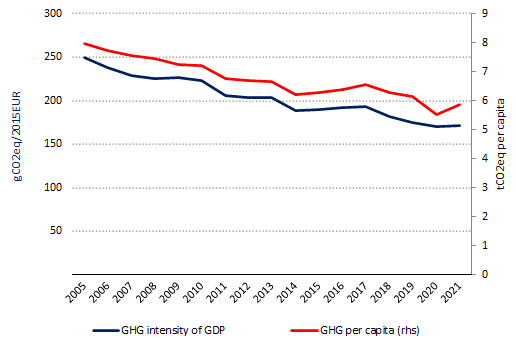
(3) Buildings include emissions from energy use in residential and tertiary buildings, and energy use in agriculture and fishery sectors.

(4) Total net GHG emission including LULUCF and excluding international aviation.

Source: EEA

(2) Renewables, smart system, efficient systems, sustainable transport, CCUS and nuclear safety, COM(2015) 80 final ('Energy Union Package').

Graph 14: GHG per capita and GHG intensity of GDP



(1) Total greenhouse gas emissions, including LULUCF and excluding international aviation.

Source: Greenhouse gas inventory 1990-2021 (EEA). Real GDP in 2015-prices (AMECO, European Commission). Population (Eurostat)

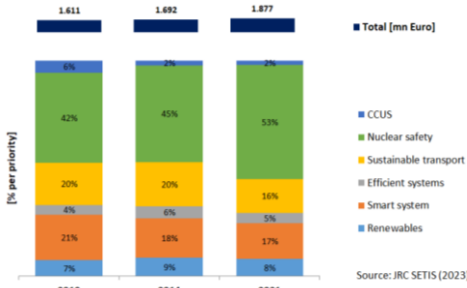
- With 171 gCO2eq/2015EUR, France lies below the EU average in terms of GHG intensity of GDP.
- With 6 tonnes of CO2 equivalent per capita, France is below the EU average in terms of GHG emissions per capita.
- For more detailed information on country profiles see [Progress made in cutting emissions \(europa.eu\)](https://europea.eu).

Research, innovation and competitiveness

1. INVESTMENT IN R&I

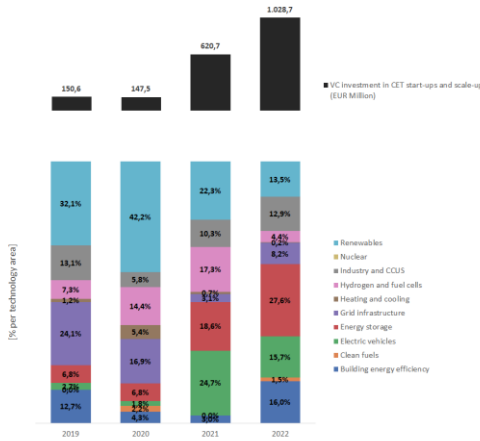
- Public investment in research and innovation (R&I) in Energy Union priorities⁽²⁾ decreased from 0.079% in 2014 to 0.075% in 2021 (share of GDP).

Graph 15: Public investment in Energy Union R&I priorities



Source: JRC SETIS 2023

Graph 16: Venture capital investment in clean energy technology (start-ups and scale-ups)

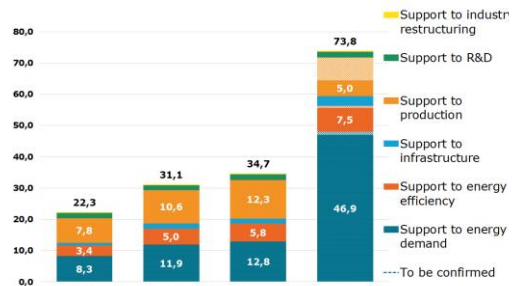


(1) Firms typically use venture capital to expand, break into new markets, and grow faster. Venture capital is essential for the growth of innovative firms and it is key to foster the EU's competitiveness and to strengthen the EU's technology sovereignty in the clean energy sector.

Source: JRC SETIS 2023

2. ENERGY SUBSIDIES

Graph 17: Energy subsidies by purpose

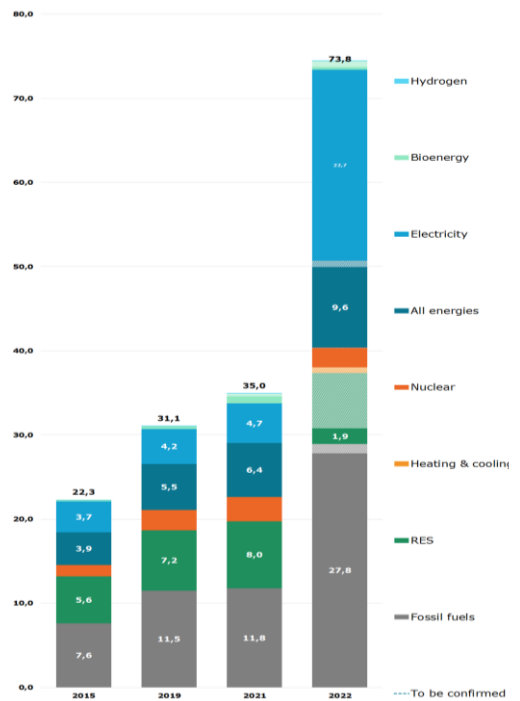


(1) Subsidies in EUR 2022 billion

(2) Some 2022 data were not fully available or validated at the time the study was completed (August 2023). For missing 2022 values, 2021 data were taken as a basis for an estimate. The estimated data are referred to as 'to be confirmed' in the graphs and indicated by hatching.

Source: Enerdata. Inventory of energy subsidies in the EU27 - 2023 edition

Graph 18: Energy subsidies by carrier



(1) Subsidies in EUR 2022 billion

(2) Some 2022 data were not fully available or validated at the time the study was completed (August 2023). For missing 2022 values, 2021 data were taken as a basis for an estimate. The estimated data are referred to as 'to be confirmed' in the graphs and indicated by hatching.

Source: Enerdata. Inventory of energy subsidies in the EU27 - 2023 edition

European Semester 2023

Country Specific Recommendation (Energy):

Reduce overall reliance on fossil fuels. Accelerate the deployment of renewable energies, focusing in particular on wind, solar and geothermal sources and biogas, including through small-scale renewable energy production and the promotion of collective self-consumption, and promote related storage technologies through increased public investment by facilitating private investment and addressing permitting bottlenecks. Further upgrade electricity transmission and distribution grids and increase cross-border electricity interconnections. Further improve the policy framework to incentivise the deep renovation of buildings and the decarbonisation of heating systems, with a particular focus on low-income households and on building stock with the lowest energy performance. Build a supporting regulatory environment to increase investment in clean-tech manufacturing, including by simplifying and speeding up permitting. Step up policy efforts aimed at the provision and acquisition of the skills needed for the green transition.⁽³⁾

For more information see the 2023 [European Semester Country Report for France](#).

National Energy and Climate Plan (NECP)

- **The draft updated NECP** was not submitted yet to the European Commission.
- For more information see the dedicated [webpage of the European Commission on NECPs](#).

Recovery and Resilience Plan (RRP) and REPowerEU chapter

- **The French RRP was approved by the Council on 13 July 2021.**
- The implementation of the measures proposed in the RRP would allow France to access **EUR 39.4 billion in grants**.
- The Commission **disbursed so far EUR 12.52 billion to France. A 2nd payment request** was submitted on 1 August 2023 and it's currently under assessment.
- On 21 April 2023, France submitted a **request to revise its RRP**, adding a **REPowerEU chapter**.
- The REPowerEU chapter proposed by France includes three **new reforms**, two **new investments**, and two **scaled-up measures**.
- The amended RRP takes into account the **revised RRF grant allocation** for France decreased to EUR 37.45 billion. It includes also the EUR 2.3 billion **REPowerEU grant allocation** and EUR 504 billion **voluntary transfer from the Brexit Adjustment Reserve**. The **total amount available** is therefore EUR 40.3 billion.
- **49.5%** of these funds are **allocated** for measures contributing to **climate objectives**, up from the 42.4% of the original plan.
- The **amended RRP, including the REPowerEU chapter, was approved by the Council** on 14 July 2023.
- For more information visit the [Recovery and Resilience Scoreboard](#).

⁽³⁾ Council of the European Union 9832/1/23