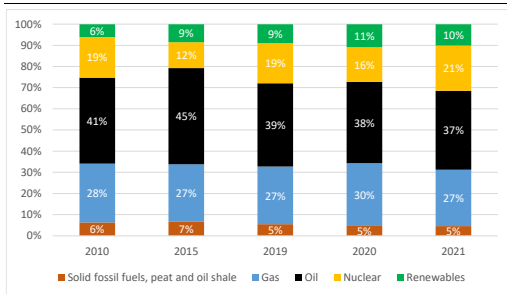


State of the Energy Union 2023 Belgium

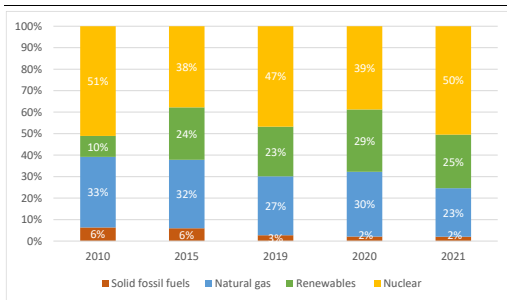
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



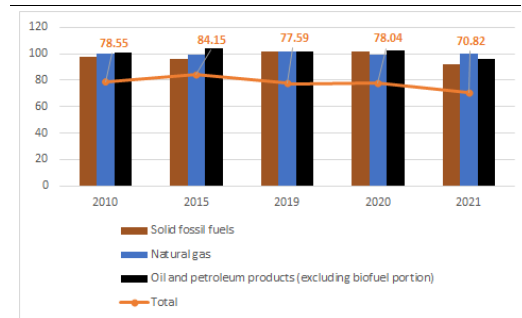
Source: Eurostat

- **Fossil fuels still play a strong role in Belgium's energy mix** and the gradual nuclear power phase-out is to be compensated by additional capacity including demand-side management and by increasing renewables.
- In order to **compensate for the partial nuclear phase-out**, efforts for a higher deployment of renewables would allow Belgium to reach its targets.

Security, solidarity and trust

1. DIVERSIFICATION OF ENERGY SOURCES AND REDUCTION OF IMPORT DEPENDENCY

Graph 3: Import dependency on fossil fuels



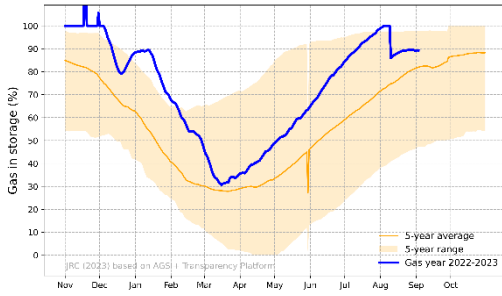
- (1) In percentages
- (2) Combustible renewables and electricity are excluded
- (3) The total amount takes into consideration the energy mix of the country

Source: Eurostat

- Belgium had limited exposure to Russian gas and moderate exposure to oil compared to the EU averages. However, it is **still importing Russian LNG** and it is highly dependent on imported fossil fuels in general. This dependence from fossil fuels makes its economy particularly sensitive to global price developments, requiring it to step up efforts on the energy transition.

2. FLEXIBILITY OF THE ENERGY SYSTEM

Graph 4: Gas storage levels



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

- Belgium has **one underground gas storage facility** with a total capacity of around **0.8 bcm**.
- On 16 October, the country's storage capacity was filled to **96.86%**.

Integrated internal energy market

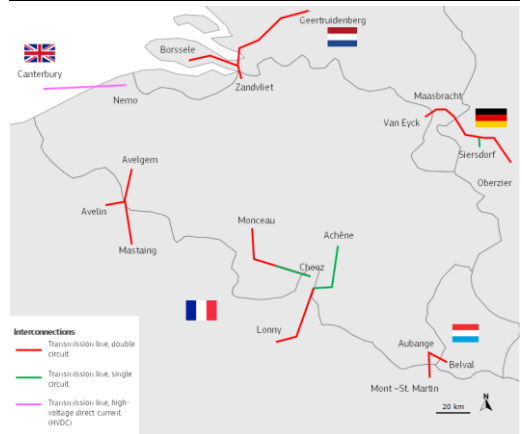
1. ELECTRICITY INTERCONNECTIVITY

2023	2030 target
15.39%	At least 15%

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

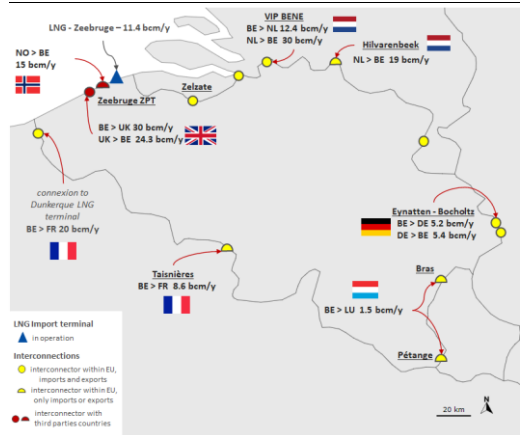
2. ENERGY TRANSMISSION INFRASTRUCTURE

Map 1: Cross-border electricity interconnections



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

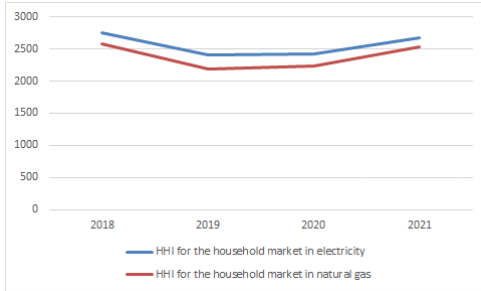
Map 2: Cross-border gas interconnections



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**



(1) No data available for HHI in electricity and natural gas household markets in 2022

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

- Data regarding the market share of the three largest suppliers in 2022 is not available.

Rollout of electricity smart meters

- Belgium had a low electricity smart meter rollout, with 22.4% of household consumers being equipped with smart meters in 2022. 80% of consumers are planned to be equipped with smart meters later than 2024. ⁽¹⁾

4. ENERGY POVERTY AND JUST TRANSITION

Table 1: **Energy poverty**

	Belgium			EU		
	2020	2021	2022	2020	2021	2022
Arrears on utility bills (households %)	3.8%	2.9%	3.2%	6.5%	6.4%	6.9%
Inability to keep home adequately warm (household %)	4.1%	3.5%	5.1%	7.5%	6.9%	9.3%
Population living in dwelling with presence of lead, damp and rot (population %)	15.7%	:	:	14.8%	:	:

Source: Eurostat

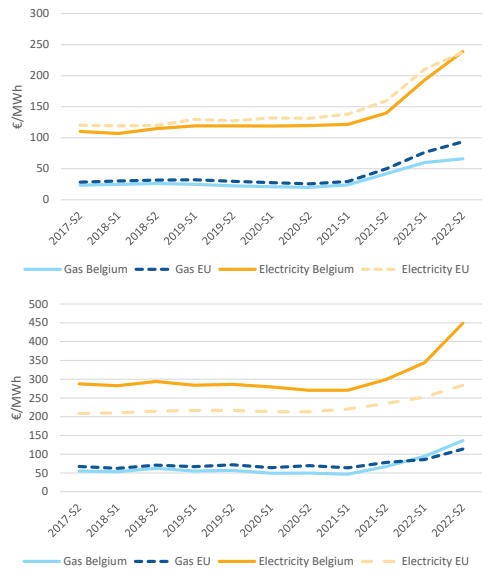
- Just transition plan:** The Belgian territorial just transition plans outlines the transition away from fossil fuels and heavy industry in three carbon intensive regions of Tournai, Mons, and Charleroi. The plans set out how the Just Transition Fund (JTF), with a national

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

allocation of EUR 183 million, will support decentralised green energy production, economic diversification and modernisation of industries. The JTF priorities are programmed under the cohesion policy European Regional Development Fund programme for Wallonie.

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

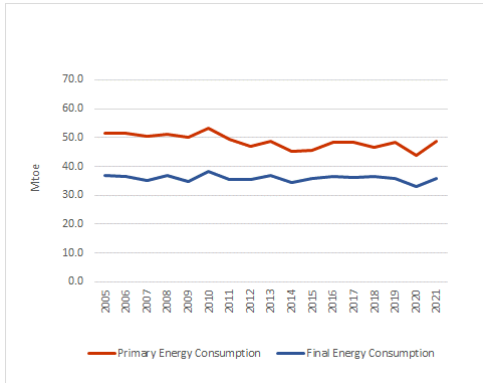
(2) On gas, the band consumption is D2 for households and I4 for industry

Source: Eurostat

Energy efficiency

1. ENERGY EFFICIENCY

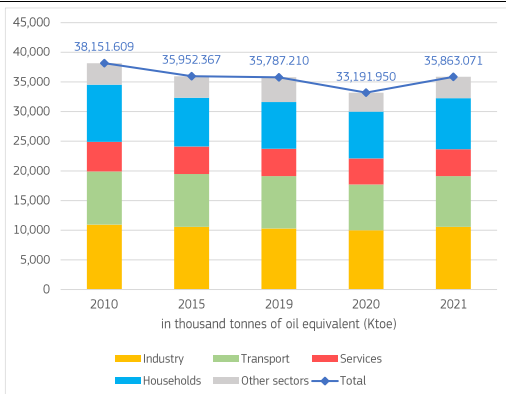
Graph 7: Primary and final energy consumption



Source: Eurostat

- In 2021, Belgium's **Primary Energy Consumption (PEC)** amounted to 48.76 Mtoe, 0.7% higher than in 2019, while its **Final Energy Consumption (FEC)** amounted to 35.86 Mtoe, 0.2% higher than in 2019, to a large extent due the COVID-19 crisis recovery.

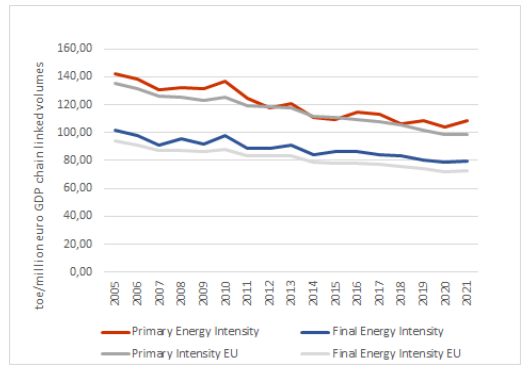
Graph 8: Final energy consumption per sector



(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

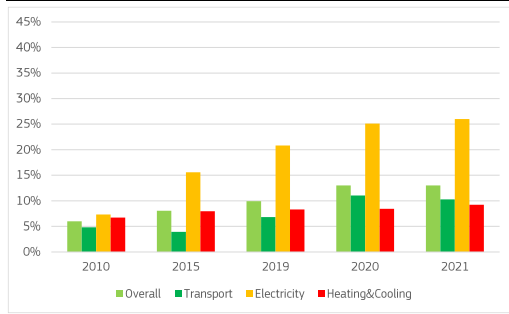
2. ENERGY SAVINGS IN BUILDINGS

- In 2020 there were **2.84 million** of **residential buildings** in Belgium.
- As per its 2020 Long Term Renovation Strategy (LTRS), **Belgium** targets to achieve **-28%** of energy savings **by 2030** compared to **2019** in the building sector.
- In 2021, the final energy consumption of residential buildings **decreased by 0.34%** compared to 2019.
- The sales of heat pumps amounted to **60.247** in 2022 representing an increase of **115%** compared to 2021, as per the European Heat Pump Association (EHPA).

Decarbonisation and climate action

1. SECTORAL SHARE OF RENEWABLE ENERGY

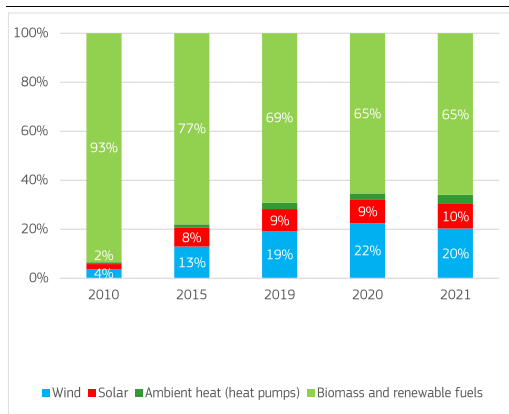
Graph 10: Share of renewable energy sources



(1) In % of gross final consumption of energy

Source: Eurostat

Graph 11: Renewable energy mix

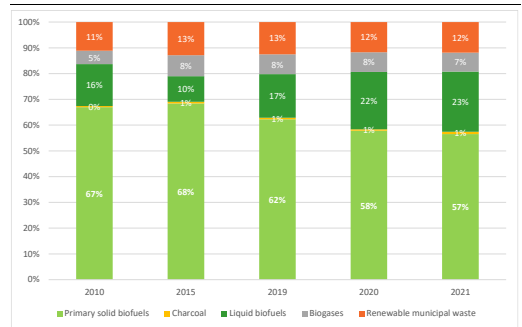


(1) In % of gross final consumption of energy

Source: Eurostat

2. BIOENERGY DEMAND

Graph 12: Bioenergy mix

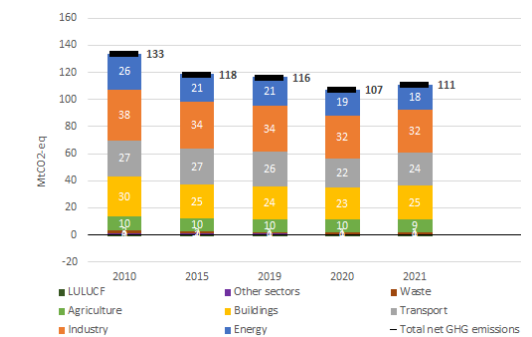


(1) Composition of bioenergy, in % of gross inland consumption of energy

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.

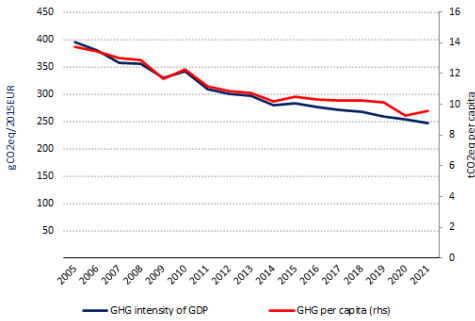
(2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use.

(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

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 246 gCO₂eq/2015EUR, Belgium lies within the EU average in terms of a GHG intensity of GDP.
- With 10 tonnes of CO₂ equivalent per capita, Belgium is above the EU average in terms of GHG emissions per capita.
- For more detailed information on country profiles see [Progress made in cutting emissions \(europa.eu\)](#).

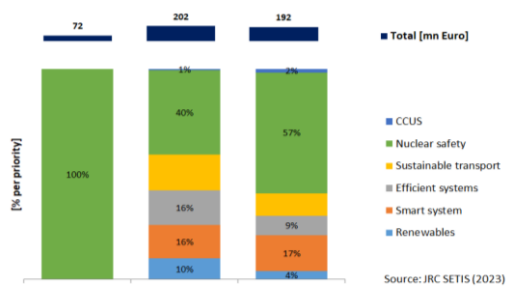
Research, innovation and competitiveness

1. INVESTMENT IN R&I

- Public investment in research and innovation (R&I) in Energy Union priorities⁽²⁾ decreased from 0.050% in 2014 to 0.038% in 2021 (share of GDP).

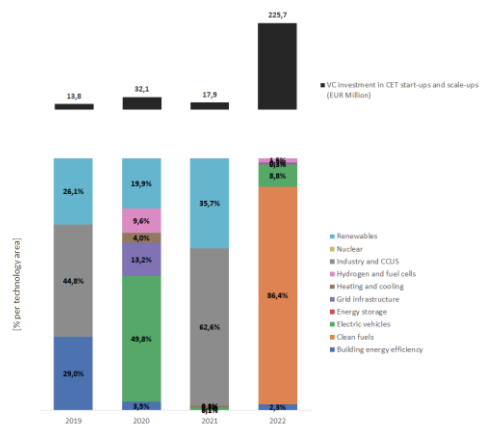
⁽²⁾ Renewables, smart system, efficient systems, sustainable transport, CCUS and nuclear safety, COM(2015) 80 final ('Energy Union Package').

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)

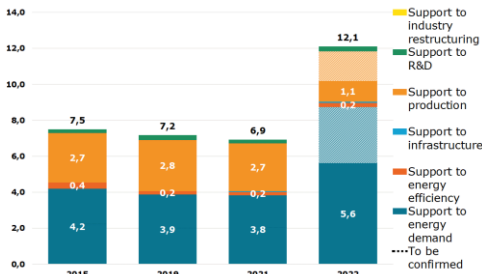


(1) Firms typically use venture capital to expand, break into new markets, and grow faster. Venture capital is essential for the growth of innovative firms and it is key to foster the EU's competitiveness and to strengthen the EU's technology sovereignty in the clean energy sector.

Source: JRC SETIS 2023

2. ENERGY SUBSIDIES

Graph 17: Energy subsidies by purpose

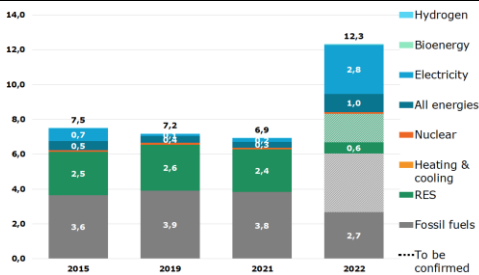


(1) Subsidies in EUR 2022 billion

(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 by stepping up energy efficiency improvements and the reduction of fossil fuel use in buildings, by further stimulating the decarbonisation of industry and by promoting the use and supply of public transport

(3) Council of the European Union 9822/1/23

as well as soft mobility. Accelerate the deployment of renewable energies and related grid infrastructure by further streamlining the permitting procedures, including by reducing the length of appeal procedures, and by adopting legal frameworks to further boost investments in renewable energy installations and facilitate energy sharing.⁽³⁾

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

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 the NECPs](#).

Recovery and Resilience Plan (RRP) and REPowerEU chapter

- **The Belgian RRP was approved by the Council on 13 July 2021.**
- The implementation of the measures proposed in the RRP would allow Belgium to access **EUR 5.9 billion in grants**.
- **50%** of these funds are **allocated** for measures contributing **to climate objectives**.
- **The Commission disbursed so far EUR 770.11 million to Belgium as pre-financing. A 1st payment request** was submitted on 29 September 2023 and is currently under assessment.
- On 20 July 2023 Belgium submitted a **request to revise its RRP**, adding a **REPowerEU chapter**.
- The amended RRP takes into account the **revised RRF grant allocation** for Belgium decreased to EUR 4.524 billion. It includes also the EUR 282 million **REPowerEU grant allocation** and EUR 229 million **voluntary transfer from the Brexit Adjustment**

Reserve. Belgium has also requested EUR 264.2 million **loans**. The **total amount available** is therefore EUR 5.3 billion.

- For more information visit the [Recovery and Resilience Scoreboard](#).