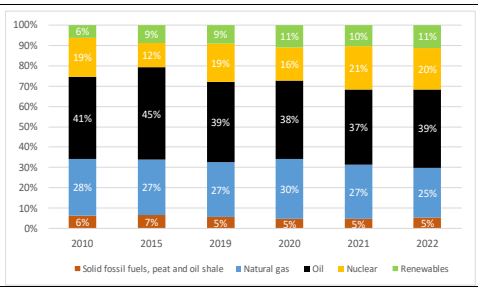




REPowerEU Two Years on_Belgium

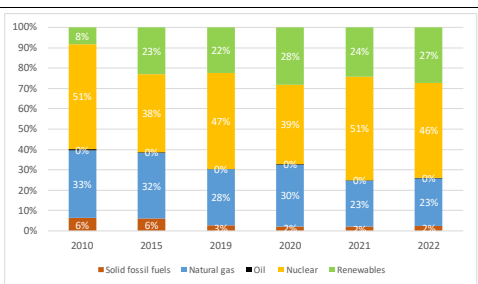
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



Source: Eurostat

Save energy

1. KEY ENERGY SAVINGS MEASURES

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

- Implementing **national awareness-raising campaigns** (“J’ai un impact”).
- Stimulating **renovation of public and private residential and non-residential buildings** with a diverse set of measures including policy (trigger points & targets for

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

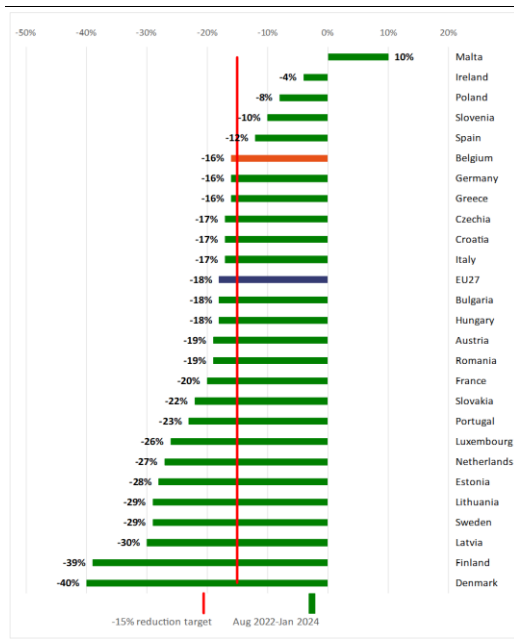
renovation), fiscality (tax reduction & exemption), accompanying measures and subsidies.

- Implementing **support and monitoring measures in the transport sector** to improve private (freight & persons) and public transport, including efficiency of railway.

2. GAS DEMAND REDUCTION

Belgium has reduced its gas consumption by **16%** in the period **August 2022 – January 2024**, below the decrease achieved at EU level (18%) but surpassing the 15% voluntary gas demand reduction agreed at the EU level ⁽¹⁾.

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

Natural gas is still quite important in the Belgian energy system. In 2022 it still accounted for 22% of gross available energy in the country and for 23% of gross electricity production. Belgium has reconsidered the future of its nuclear powerplants, to ensure the security of its electricity supply.

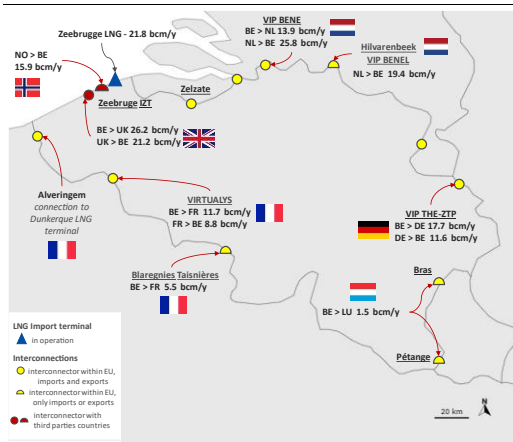
In December 2023, the Belgium government and ENGIE signed the final agreement to extend the operation of the Tihange 3 and Doel 4 nuclear power plants for 10 years until 2035, which will keep 2 GW of nuclear power in the energy mix. Belgium's draft updated NECP mentions that this decision took into consideration both the effects on security of supply of higher gas prices felt after Russia's invasion of Ukraine and the unavailability of part of the French nuclear power generation in 2022. Other measures taken to ensure security of energy supply include the use of the Capacity Remuneration Mechanism (CRM) and the accelerated deployment of onshore and offshore renewable energy, including the development of 3.5 GW of offshore wind energy in the North Sea by 2030.

2. GAS INFRASTRUCTURE DEVELOPMENTS

While Belgium fully relies on imports of natural gas, only a small part of imports come from Russia. Traditionally its dependence on imports from Russia was lower than the EU average, amounting to 12% in 2021.

Belgium has one gas storage facility with a capacity of 0.8 bcm and one LNG terminal in Zeebrugge. The latter became crucial after the invasion of Ukraine by Russia, and should see its regasification capacity enhanced by an additional 10.5 GWh per hour by 2026.

Map 1: Cross-border gas infrastructure



(1) Virtualys is virtualising 'Alveringem' and 'Taisnières H/Blaregnies Segeo/Troll' since 1 Dec 2017

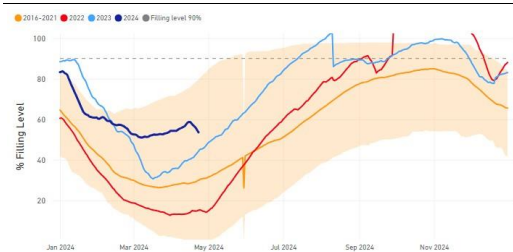
Source: European Commission map recreation (based on ENTSO- G)

3. GAS STORAGE

Belgium operates one underground storage facility⁽²⁾ with a total capacity of around 0.8 bcm, representing only 5% of its total yearly demand.

Belgium fulfilled its gas storage obligations last winter, reaching 99.1% by 1 November 2023⁽³⁾, and ended the winter season with a storage filled at 54.35% by 1 April 2024.

Graph 4: Storage levels in Belgium



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

4. NUCLEAR FUEL DIVERSIFICATION

In December 2023, the Belgium government and ENGIE signed the final agreement to extend the operation of the Tihange 3 and Doel 4 nuclear power plants for 10 years until 2035, which will keep 2 GW of nuclear power in the energy mix until 2035. Tihange-2 was shut down in January 2024. In collaboration with international partners, Belgium is also active in the research field seeking innovative solutions for the management of high-

⁽²⁾ Belgium has one underground storage facility: Loenhout managed by Fluxus.

⁽³⁾ 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.

level radioactive waste. The country has decided to build a new major nuclear research infrastructure, MYRRHA (Multipurpose Hybrid Research Reactor for High Tech Applications), with an ambition to maintain a world-class R&D and reinforce its position as innovation player in numerous related fields.

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 **Belgium** aggregated gas demand of **0.41 bcm in 2023** under the EU Energy Platform. This represents the equivalent of 2.63% of the country's yearly gas consumption.

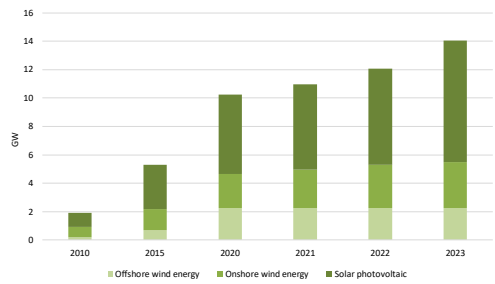
Produce clean energy

1. INSTALLED RENEWABLE ELECTRICITY CAPACITY, IN WIND AND SOLAR

In **2023**, Belgium installed around 2 GW of renewable electricity capacity, bringing the total to **15 GW** (vs. 11.9 GW in 2021).

In **2023**, the annual growth rate of installed renewables power capacity rose to **15.3%** compared to 5.5% in 2021⁽⁴⁾.

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, Belgium installed 0.2 GW of wind power capacity (vs. 0.3 GW in 2021).

(3) In 2023, Belgium installed 1.8 GW of solar photovoltaic capacity (vs. 0.4 GW in 2021).

Source: IRENA, Renewable capacity statistics, 2024

2. ELECTRICITY INFRASTRUCTURE DEPLOYMENT

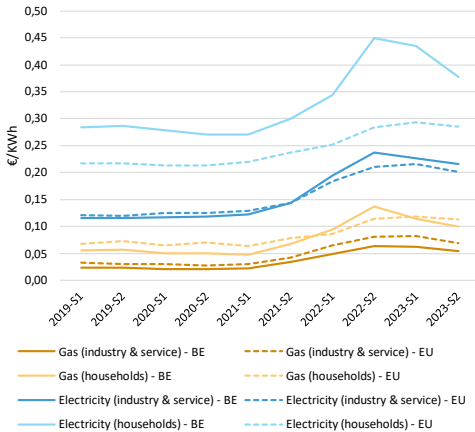
Belgium has an **electricity interconnection** level of just above the advised 15%. In the first PCI/PMI list it has one interconnection project with France, the line between Lonny and Gramme. It will also increase internal and interconnection capacity between Zandvliet (NL) and Liefkenshoek. It develops an interconnector with the UK, the Cronos project. Regarding offshore electricity, Belgium develops a hybrid interconnector with Denmark, the Triton link and with the UK the Nautilus link.

The further development of the electricity grids in Belgium requires significant investment. As an example, between 2024 and 2027 Elia will invest EUR 6.5 billion in the high voltage grid, which is more than four times the amounts it has invested during the past three years. Significant amounts will be needed also for the distribution network.

⁽⁴⁾ International Renewable Energy Agency (2024). Renewable capacity statistics 2024

Energy price developments

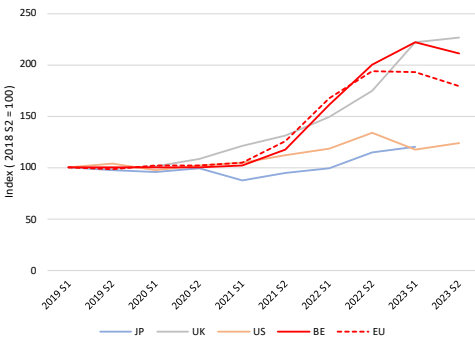
Graph 6: **Belgium's energy retail prices for households and industry & service**



- (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 BE), the consumption band is ID, which refers 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 provides an insight into international competitiveness
- (2) JP = Japan

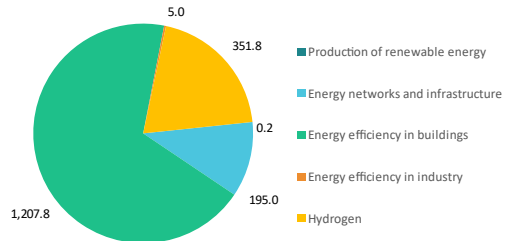
Source: Eurostat, IEA

Smartly combine investments and reforms in the RRP

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

- Approved by Council on 8 December 2023
- Total amount: EUR 5.3 billion
- Amount allocated for energy: EUR 1.76 billion
- Climate tagging: RRP: 49.2 %; REPowerEU chapter: 87.8%

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



Source: European Commission

Tangible results: reforms & investments

- **Renewables, energy infrastructure:** investment in an offshore energy island hub in the North Sea, to enable future interconnection with other countries, expected to allow the connection of at least 3.15 GW of future offshore wind energy to the electricity grid. This will more than double Belgium's offshore wind energy capacity.
- **Energy efficiency in buildings:** investments supporting the home renovation of 1 749 low-income households; investment for the renovation of 3 600 social housing units (to equip them with solar panels); COBRACE reform amending the Brussels code on air, climate and energy, introducing new obligations on the renovation of buildings and new buildings.
- **Hydrogen:** Backbone for hydrogen, construction and operation of 150 km of pipeline for hydrogen (or realized via repurposing of pipelines – i.e. conversion / repurposing of existing natural gas networks to 100% hydrogen).

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

Belgium remains dependent on imports from non-EU countries for most clean energy technologies. However, Belgium shows some positive developments in the battery and electrolyser supply chain, as well as a considerable foothold in the wind industry.

Notably, Belgium is a strategic producer of offshore wind foundations and substations, with multiple factories in Flanders contributing to offshore projects all over Europe. Belgium has also been historically manufacturing wind rotor gearboxes in Lommel.

Belgium is host to two electrolyser manufacturing plants, both supported by the Important Project of Common European Interest (IPCEI) Hy2Tech programme. One is operated by an American company in Oevel with an estimated capacity of 500 MW, while the other, situated in Seraing, is the stacking unit of a new transnational operation (with a second factory in France), managed by a Belgian firm.

Both operators have announced plans to scale up their capacity to 1 GW each at the latest by 2030. Belgium has substantial potential for battery manufacturing, with one manufacturing plant located in Ninove, with the capacity to produce 10 000 units annually. It is operated by a Belgian company that aims to establish Belgium's first battery pack gigafactory (3 GWh) in Seneffe-Manage by mid-2025.

Regarding solar PV, Belgium has been producing solar modules in Wallonia for an extended period, boasting a capacity of about 100 MW as of 2023. The landscape comprises a standard module producer and two firms specializing in building

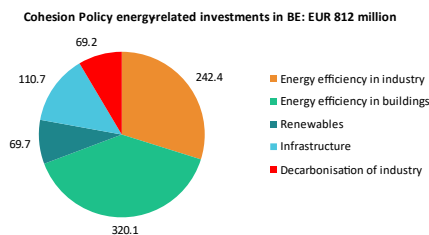
integrated photovoltaics (BIPV). One of these companies serves as the manufacturer for a pioneering offshore PV project in the North Sea, known as SeaVolt.

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 ⁽⁵⁾

⁽⁵⁾ <https://cohesiondata.ec.europa.eu/d/hgvj-gyin>