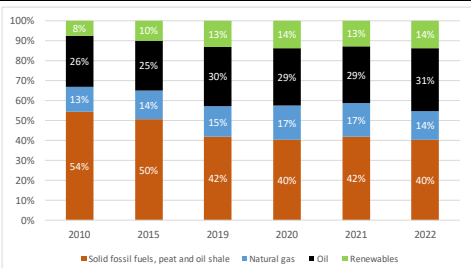




REPowerEU Two Years on Poland

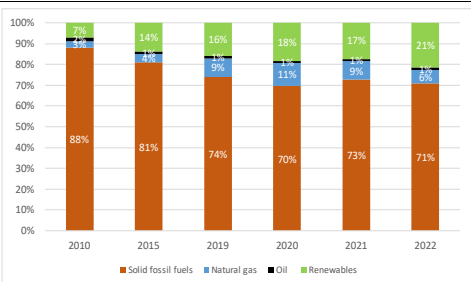
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



Source: Eurostat

Save energy

1. KEY ENERGY SAVINGS MEASURES

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

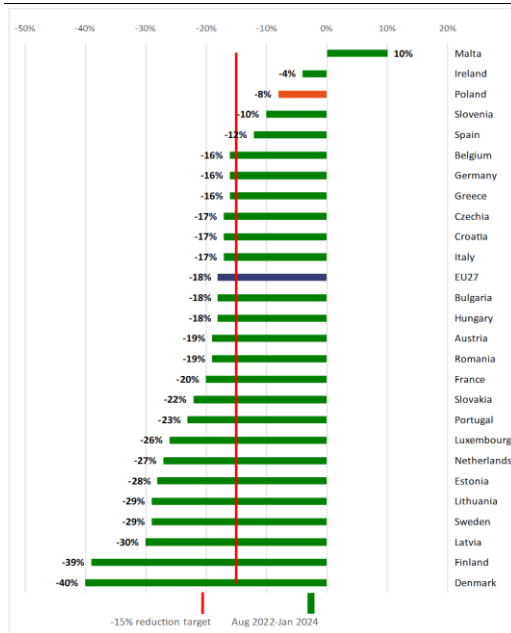
- On 15 July 2022, the **clean air plus programme** was launched giving up to a 90% subsidy to households for **thermal modernisation; replacing outdated heating boilers; replacing outdated heating connections.**

- Moreover, as of 3rd January 2023, the government has **increased the funding for thermal modernisation of houses and heat sources replacement.**
- Other measures to promote energy savings include **extending the white certificate scheme to the transport sector**, a programme supporting energy efficiency in businesses using energy performance contracts; and developing an energy savings registry.

2. GAS DEMAND REDUCTION

Poland has reduced its gas consumption by **8%** in the period **August 2022 – January 2024**, below the decrease achieved at EU level (18%) and 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

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

Diversify energy supplies

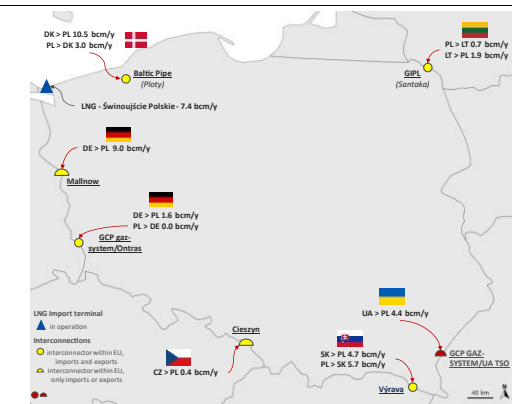
1. KEY ACTIONS

The security of Poland's gas supply is strong, thanks to strategic infrastructure investments and projects that have significantly diversified its supply routes.

2. GAS INFRASTRUCTURE DEVELOPMENTS

Poland has access to Norwegian gas via the Baltic Pipe pipeline operational since September 2022, the LNG terminal, the Klaipedia LNG terminal in Lithuania and in 2022 gained access to gas flows from Slovakia thanks to the set up of an interconnector. The Floating storage and regasification unit (FSRU) in Gdansk, with a total capacity of 6.1 bcm/y, will further diversify Poland's gas supplies. In January, Poland's transmission system operator selected the company that will deliver and operate the FSRU. The REPowerEU Chapter of Poland's Recovery and Resilience plan (RRP) supports the construction and commissioning of the 250km long onshore gas pipeline connecting Gdansk and Gustorzyn.

Map 1: Cross-border gas infrastructure



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

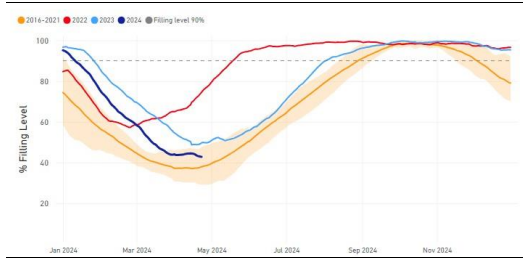
3. GAS STORAGE

Poland's total storage capacity (3.79 bcm) is relatively small compared to its annual consumption of almost 20 bcm/year in 2022. GSP, the owner and operator of Poland's seven gas storage facilities⁽²⁾, is considering further expanding the total capacity.

⁽²⁾ UGS Wierchowice, VGS GIM Kawerna (Kosakowo, Mogilno) and VGS GIM Sanok (Brzeznica, Husow, Strachocina, Swarzew).

Poland fulfilled its gas storage obligations last winter, reaching 99.5% by 1 November 2023⁽³⁾, and ended the winter season with a storage filled at 43.67% by 1 April 2024.

Graph 4: Storage levels in Poland



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

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 **Poland** aggregated gas demand of **1.29 bcm** in 2023 under the EU Energy Platform. This represents the equivalent of 6.55% of the country's yearly gas consumption.

Produce clean energy

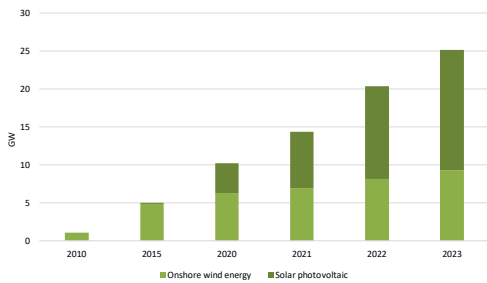
1. INSTALLED RENEWABLE ELECTRICITY CAPACITY, IN WIND AND SOLAR

In **2023**, Poland installed around 4.8 GW of renewable electricity capacity, bringing the total to **27.3 GW** (vs. 16.5 GW in 2021).

⁽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.

In **2023**, the annual growth rate of installed renewables power capacity stood at **21.4%** compared to 34.1% 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, Poland installed 1.2 GW of wind power capacity (vs. 0.7 GW in 2021).
- (3) In 2023, Poland installed 3.6 GW of solar photovoltaic capacity (vs. 3.5 GW in 2021).

Source: IRENA, Renewable capacity statistics, 2024

2. ELECTRICITY INFRASTRUCTURE DEPLOYMENT

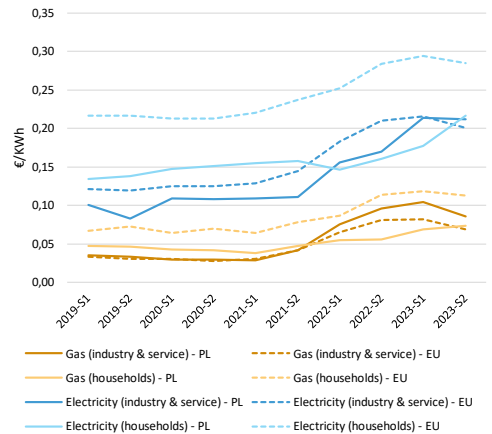
Upgrades of the transmission and distribution network are a prerequisite for the energy transition in Poland. Upgrading the internal grid is also needed to enable higher cross border- exchanges with neighbouring countries. In this context, new high-voltage direct current connections are needed between North and South, as well as the expansion of the alternate current AC network.

Planned investment in the power grid included in Poland's RRP will be important but will not meet all the investment needs for the grid. The completion of the Baltic synchronisation remains a priority and it has been accelerated to February 2025, following the signing of a political declaration, between the countries involved and the Commission. It is important that all investment strands are on track, including the Harmony Link, which faces a delay following cancellation of the tender. A possible new routing is being assessed and a new tender should be organised as soon as possible. To enable full functionality of the Harmony Link, Poland is constructing three new electricity lines and modernising another three in the northeast of the country. The internal line between Stanisławów and Ostrołęka (LitPol Link Stage 2) is included in the 1st EU list of PCI-PMIs.

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

Energy price developments

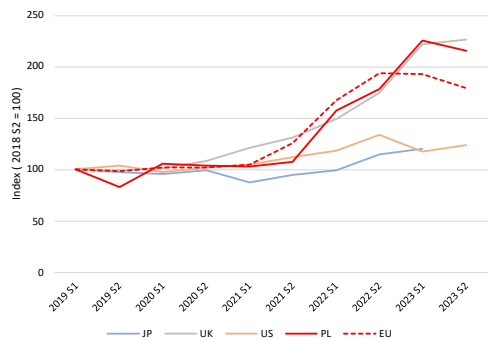
Graph 6: **Poland's energy retail prices for households and industry & service**



- (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 PL), 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

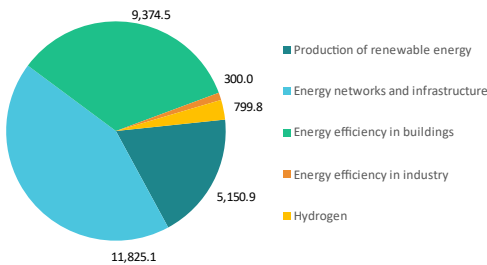
Source: Eurostat, IEA

Smartly combine investments and reforms in the RRP

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

- Approved by Council on 8 December 2023
- Total amount: EUR 59.8 billion
- Amount allocated for energy: EUR 27.5 billion⁽⁵⁾
- Climate tagging: RRP: 46.6 %; REPowerEU chapter: 65.5 %

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



Source: European Commission

Tangible results: reforms & investments

- **Renewables:** streamlining of permitting process for renewable energy, with a target to achieve 30 GW of total installed capacity of onshore wind and photovoltaic installations by June 2026.
- **Energy infrastructure:** construction or modernisation of 880 km electricity distribution networks in rural areas, including the necessary stations and integrating smart grid functionalities, to enable the connection of new renewable energy sources in these areas.
- **Energy efficiency:** replacement of heat sources for residential and public buildings, including the decarbonisation of district heating and improvements of the energy efficiency and decarbonisation of heating sources for single and multi-family dwellings, social facilities and schools. The installation of renewable energy installations in private buildings is also promoted.

⁽⁵⁾ EUR 631 million of gas infrastructure are included in “Energy networks and infrastructure”.

Highlights of the National Energy and Climate Plan

- The **draft updated NECP** was submitted to the European Commission in March 2024.
- 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

Poland exhibits considerable manufacturing capacity for clean technologies and has great potential for further increases, notably in the battery and solar PV supply chain. There are several module manufacturing units throughout the country, which all together have an estimated 450 MW annual output capacity. Additionally, a cell manufacturing plant with a targeted capacity of 100 MW came online in Wrocław in 2021, and the first Polish gigafactory for cell production is underway in Racibórz, expected to start production in 2025/2026. Poland is active in the production of onshore wind towers and blades. To keep pace with Poland's growing offshore wind sector, three large-scale assembly lines for offshore towers and nacelles are currently in progress in Szczecin and Gdansk. Regarding energy storage and production of batteries, Poland leads Europe in lithium-ion battery production, with net exports exceeding EUR 6 billion in 2022. Displaying a current capacity of 70 GWh/y, the main battery producer in Poland is a Korean-owned facility in Biskupice Podgórne, which is poised to achieve an annual output target of 115 GWh by 2025. A European company also invests in the large-scale battery manufacturing plants with an estimated capacity of 40 GWh in 2024, that are expected to bolster Poland's leading position on the market and further contribute to the EU's goals for autonomy in the net-zero industry. Also, essential production units for electrolytes, cathodes and separators are already operational in Poland, and additional capacity is in development. Regarding the green hydrogen supply chain, promising initiatives are underway in Poland. Two dynamic firms based in Gdansk have recently initiated the production of electrolyzers, there are

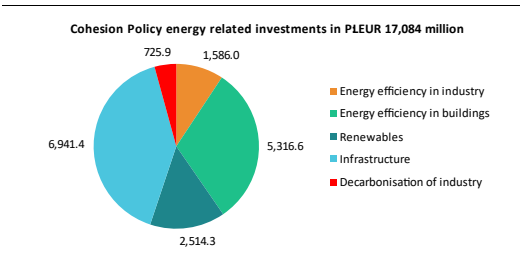
other small enterprises in this sector. The National Strategy for Hydrogen, which is expected to be updated, also features hydrogen prominently in R&I, production, and end use sectors. Poland is also interested in supporting the emergence of Hydrogen Valleys, as part of the national and European priority.

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⁽⁶⁾

⁽⁶⁾ <https://cohesiondata.ec.europa.eu/d/hgyj-gyin>