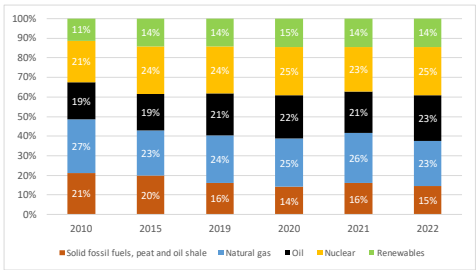
REPowerEU Two Years on_Slovakia

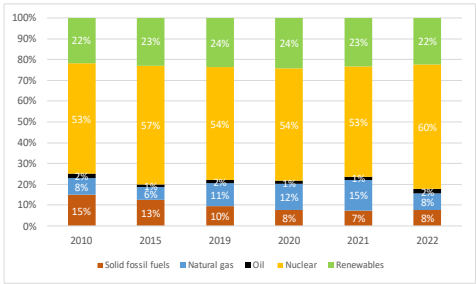
Key energy figures

Graph 1: **Energy mix**



Source: Eurostat

Graph 2: **Electricity mix**



Source: Eurostat

Save energy

1. KEY ENERGY SAVINGS MEASURES

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

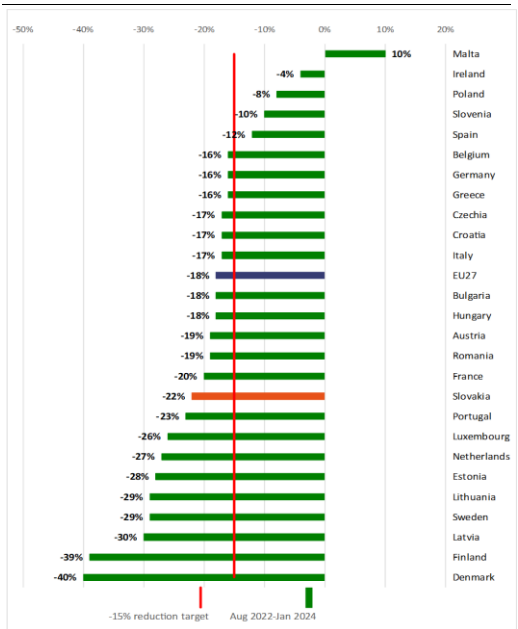
- **Voluntary agreements with industry**.
- To **raise awareness on energy savings**, educational activities have been set up, in particular, via the website of the Slovak Agency for Innovation and Energy, a free hotline and one-stop shops.

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

2. GAS DEMAND REDUCTION

Slovakia has reduced its gas consumption by **22%** 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 [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

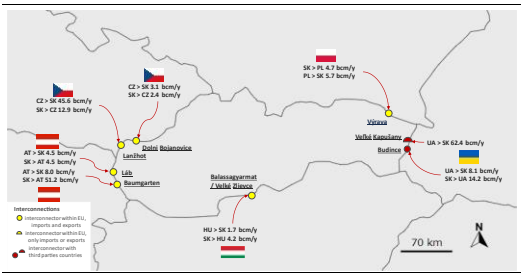
1. KEY ACTIONS

Slovakia has significantly decreased its dependence on Russian gas flows since the beginning of the war in Ukraine, but Russian gas still represented 69% of its total gas demand in 2023.

2. GAS INFRASTRUCTURE DEVELOPMENTS

In 2022, Slovakia diversified its gas suppliers, establishing connections with all neighbouring countries, implementing interconnection projects with Hungary, reverse-flow projects with Czechia, Ukraine, and Austria, and developing underground gas storage sites. Slovakia's largest gas supplier, the SPP, signed contracts for Norwegian gas and LNG for the first time, and has even started looking into joining LNG terminals in Baltic Sea countries.

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



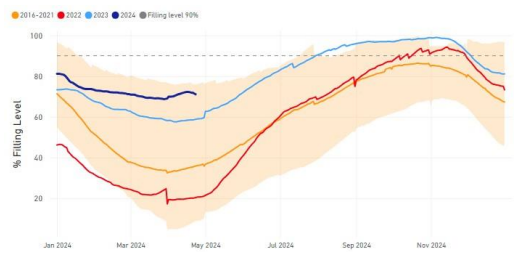
Source: European Commission map recreation (based on ENTSO- G)

3. GAS STORAGE

Slovakia is in a very good position in terms of natural gas underground storage capacities [2] due to its favourable geological condition, with a total storage capacity amounting to 3.38 bcm, representing around 75% of its annual gas consumption in 2022.

Slovakia fulfilled its gas storage obligations last winter, reaching 98.8% by 1 November 2023 [3], and ended the winter season with a storage filled at 69.90% by 1 April 2024.

Graph 4: **Storage levels in Slovakia**



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

(2) Slovakia operates two underground storage facilities: Láb (including Gajary baden) managed by Nafta, and UGS Lab IV – Pozagas managed by Pozagas.

4. NUCLEAR FUEL DIVERSIFICATION

Slovenské Elektrárne continues to depend on Russian nuclear fuel supply for its VVER-440 nuclear power plants, but efforts to reduce this dependency are progressing well. In August 2023, Slovenské Elektrárne signed an agreement with Westinghouse for the licensing and supply of VVER-440 fuel assemblies. Earlier, in May 2023, the Slovak utility signed a Memorandum of Understanding with the French company Framatome setting up the basis for future cooperation and potential agreement on extending the long-term commercial relations between both parties, including on possible development of European fuel design.

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 **Slovakia** aggregated gas demand of **2.35 bcm** in 2023 under the EU Energy Platform. This represents the equivalent of 52% of the country's yearly gas consumption.

Produce clean energy

1. INSTALLED RENEWABLE ELECTRICITY CAPACITY, IN WIND AND SOLAR

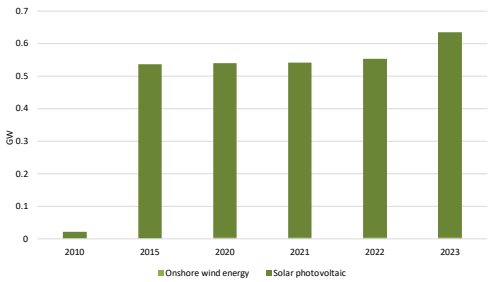
In **2023**, Slovakia installed 82 MW of renewable electricity capacity, bringing the total to **2.5 GW** (vs. 2.4 GW in 2021).

In **2023**, the annual growth rate of installed renewables power capacity rose to **3.4%** compared to 1.2% in 2021 [4].

(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.

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

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



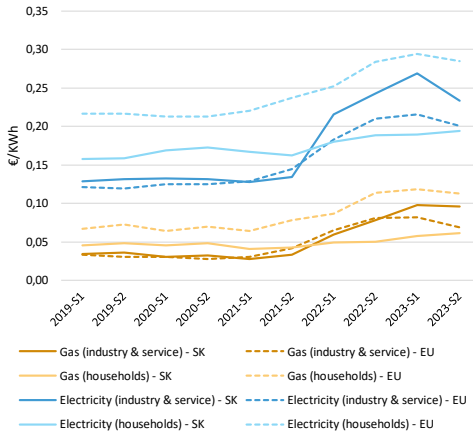
(1) The renewable power capacity data reflects the capacity installed and connected at the end of the calendar year.
(2) In 2021, Slovakia reached 4 MW of onshore wind capacity installed. No new wind power plants have been deployed to date.
(3) In 2023, Slovakia installed 82 MW of solar photovoltaic capacity (vs. 2 MW in 2021).
Source: IRENA, Renewable capacity statistics, 2024

2. ELECTRICITY INFRASTRUCTURE DEPLOYMENT

Slovakia is well-interconnected with neighbouring countries at transmission system level. There is one Project of Common Interest (PCI) for a new transmission line with Czechia aiming to maintain secure operation of both transmission systems, while more efforts are put on smart interconnection of the distribution grids. There are two on-going PCI projects in this context: ACON with Czechia and the Danube InGrid with Hungary. Slovakia also intends to support the modernisation and digitalisation of the transmission system and regional distribution systems through the Recovery and Resilience Facility funding.

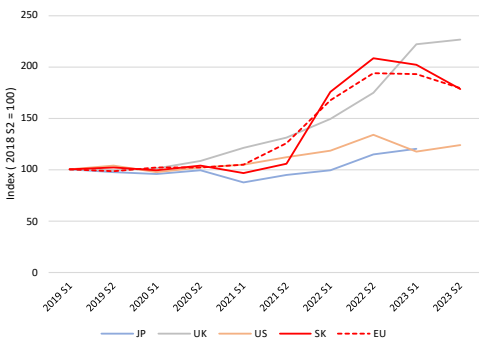
Energy price developments

Graph 6: **Slovakia'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)**



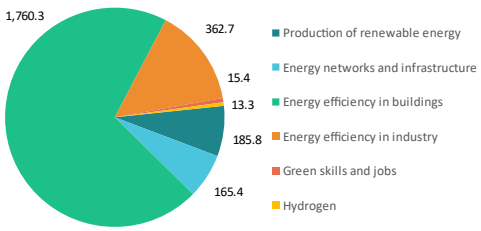
(1) For Eurostat data (EU and SK), the band consumption is ID referring to large-sized consumers with an annual consumption of between 2 000 MWh and 20 000 MWh, such as in electricity intensive manufacturing sectors, and gives an insight into international competitiveness
(2) JP = Japan
Source: Eurostat, 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 6.4 billion
- Amount allocated for energy: EUR 2.5 billion
- Climate tagging: RRP: 47.7%; REPowerEU chapter: 84.6%

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



Source: European Commission

Tangible results: reforms & investments

- **Energy efficiency in buildings:** large scale renovation to make at least 25 164 family houses more energy efficient;
- **Renewables:** Reform aiming to promote the roll-out of new renewable energy sources by creating efficient support mechanisms for increasing the share of renewables in the transport, electricity and heating sector;
- **Infrastructure:** Modernisation of at least 225 km of transmission and regional distribution systems and upgrading high voltage electrical transmission lines to remove bottlenecks in grids to integrate at least 469 MW of cumulative additional capacity for connection of renewables;
- **Energy efficiency in industry:** Reform on the adoption of a competitive scheme for reduction of greenhouse gas emissions in industry by using the currently best available technologies in industrial processes. Such scheme shall target low carbon processes and technologies in industries and the adoption of energy efficiency measures.
- **Hydrogen:** Action Plan of the National Hydrogen Strategy and enabling conditions for the development of a hydrogen economy.

Highlights of the National Energy and Climate Plan

- The **draft updated NECP** was submitted to the European Commission in August 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

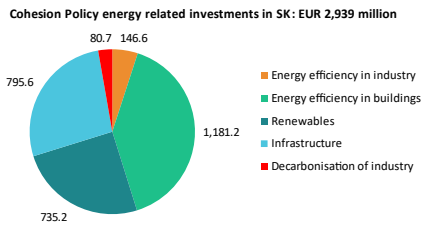
Slovakia continues to depend on imports for clean energy technologies. Even so, there have been positive developments in battery manufacturing and Slovakia's foothold in the solar photovoltaic modules supply chain is growing. Slovakia has a lot of battery manufacturing potential, with one Chinese company investing in the country in power battery technology research and development and innovation. In November 2023, the government signed a Memorandum of Understanding with two battery companies, the Chinese one mentioned above and a Slovak one, to support the construction of a lithium-ion battery gigafactory with 10GWh in Slovakia by 2025 to supply the electric vehicles market. The first Slovak battery production line was launched a month later. Despite the strong demand for it, solar modules manufacturing has only recently developed in Slovakia. The pioneer is a Slovak company founded in 2021, specialising in the production of photovoltaic panels, that plans to build a 150 MW plant in Vranov. The plant will produce double-sided glass panels and aims for a capacity of 500 MW by 2024. Possibilities for increasing the production of photovoltaic panels in Slovakia are also being explored thanks to a Memorandum of Understanding with Japan.

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