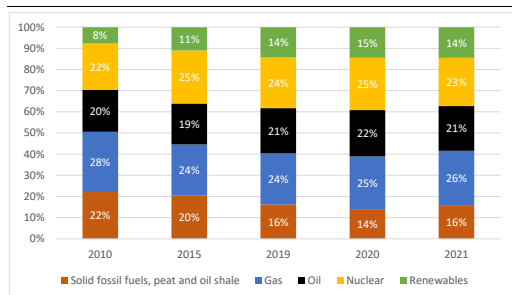


State of the Energy Union 2023 Slovakia

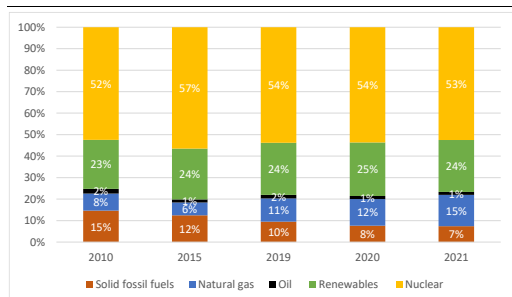
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



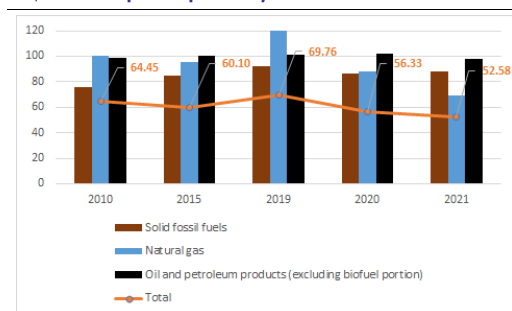
Source: Eurostat

- **Fossil fuels and nuclear energy** play a substantial role in Slovakia's energy mix with renewable energy playing a more secondary role. This makes its economy particularly sensitive to global price developments, requiring it to step up efforts on the energy transition.
- In 2021, Slovakia's **electricity mix** was substantially fuelled by nuclear energy (53%), with only a quarter coming from renewable sources. Natural gas comes in third, with 15%.

Security, solidarity and trust

1. DIVERSIFICATION OF ENERGY SOURCES AND REDUCTION OF IMPORT DEPENDENCY

Graph 3: Import dependency on fossil fuels



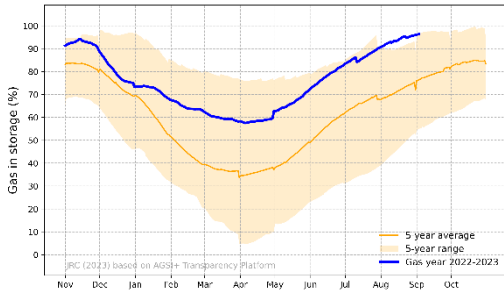
- (1) in percentages
- (2) combustible renewables and electricity are excluded
- (3) the total amount takes into consideration the energy mix of the country

Source: Eurostat

- **Slovakia continues to depend on Russian fossil fuels**, and efforts to reduce this dependency are progressing too slowly.
- Slovakia is **highly exposed** to a possible disruption of Russian energy imports and rising import costs, which would adversely affect the supply side of the economy.

2. FLEXIBILITY OF THE ENERGY SYSTEM

Graph 4: Gas storage levels



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

- Slovakia has **two underground gas storage facilities** with the total capacity amounting to **3.98 bcm**.
- On 16 October, the country's storage capacity was filled to **97.85%**.

Integrated internal energy market

1. ELECTRICITY INTERCONNECTIVITY

2023	2030 target
50.56%	At least 15%

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

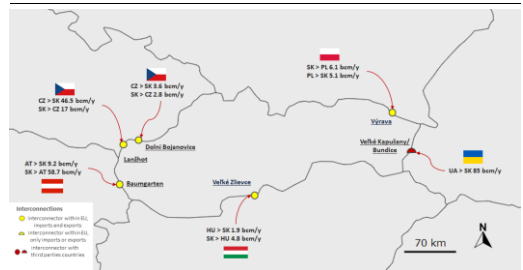
2. ENERGY TRANSMISSION INFRASTRUCTURE

Map 1: Cross-border electricity interconnections



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

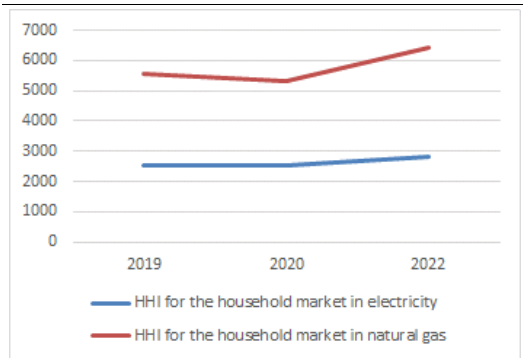
Map 2: Cross-border gas interconnections



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

3. MARKET INTEGRATION

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



(1) No data available for HHI in electricity and natural gas household markets in 2018 and 2021.

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

- In 2022 in Slovakia, the market share of the three largest suppliers reached 87% for electricity and 94.6% for natural gas.

Rollout of electricity smart meters.

- Slovakia had a **low electricity smart meter rollout**, with 15.1% of household consumers being equipped with smart meters in 2022.⁽¹⁾

4. ENERGY POVERTY AND JUST TRANSITION

Table 1: **Energy poverty**

	Slovakia			EU		
	2020	2021	2022	2020	2021	2022
Arrears on utility bills (households %)	5.2%	4.6%	5.9%	6.5%	6.4%	6.9%
Inability to keep home adequately warm (household %)	5.7%	5.8%	7.1%	7.5%	6.9%	9.3%
Population living in dwelling with presence of lead, damp and rot (population %)	4.9%	:	:	14.8%	:	:

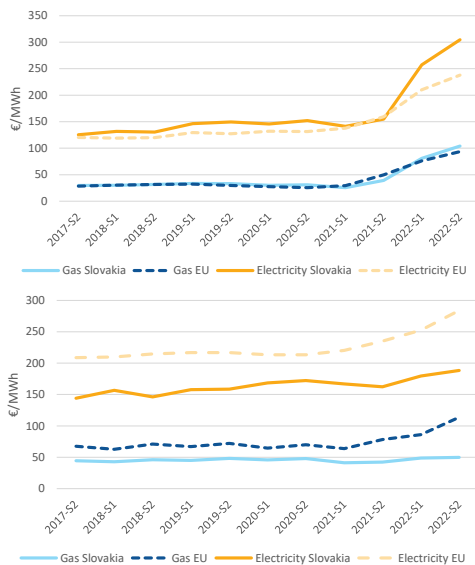
Source: Eurostat

- **Just transition plan:** The Slovakian Territorial Just Transition Plans (TJTP) outline the transition away from coal extraction and coal-fired electric power generation in the regions of Trenčín, Banská Bystrica, and Košice. The plans set out how the Just Transition Fund (JTF), with a national allocation of 459€ million, will support the development of renewable energy sources, economic diversification, and modernisation of industries. Coal phase-out commitment in 2023.

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

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.

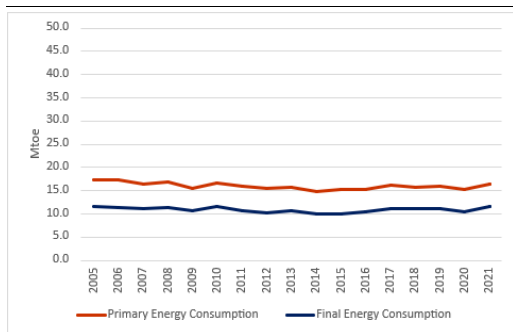
(2) On gas, the band consumption is D2 for households and I4 for industry.

Source: Eurostat

Energy efficiency

1. ENERGY EFFICIENCY

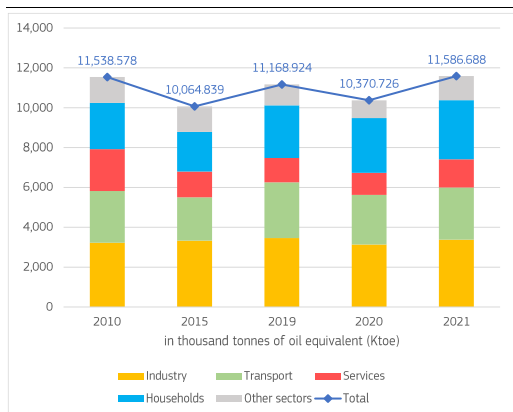
Graph 7: Primary and final energy consumption



Source: Eurostat

- In 2021, Slovakia's **Primary Energy Consumption (PEC)** amounted to 16.4 Mtoe, 2.8% higher than in 2019, while its **Final Energy Consumption (FEC)** amounted to 12 Mtoe, 3.7% higher than in 2019, to a large extent due to the COVID-19 crisis recovery.

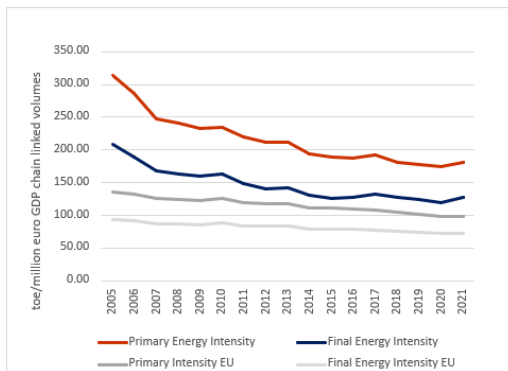
Graph 8: Final energy consumption per sector



(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

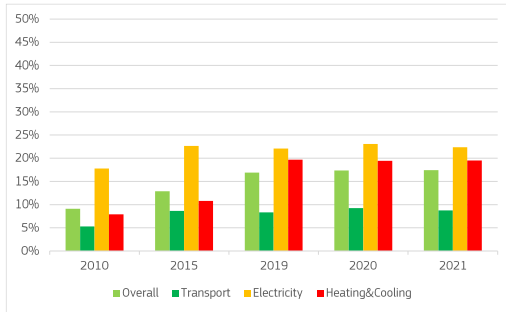
2. ENERGY SAVINGS IN BUILDINGS

- In 2020 there were **1.03 million** of **residential buildings in Slovakia**.
- As per its 2020 Long Term Renovation Strategy (LTRS), **Slovakia** targets to achieve **-16%** of energy savings **by 2030** compared to **2016** in the building sector.
- In 2021, the final energy consumption of residential buildings **decreased by 3.83%** compared to 2019.
- The sales of heat pumps amounted to **13 467 units** in 2022 representing an increase of **106%** compared to 2021, as per the European Heat Pump Association (EHPA).

Decarbonisation and climate action

1. SECTORAL SHARE OF RENEWABLE ENERGY

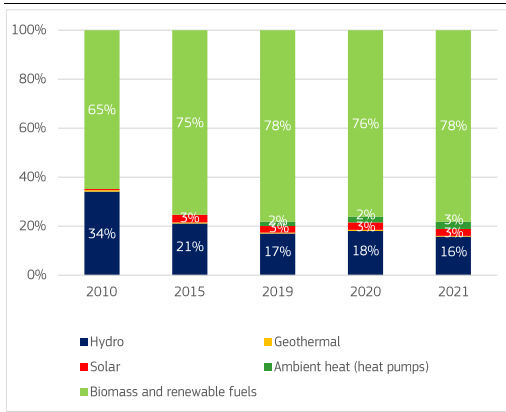
Graph 10: Share of renewable energy sources



(1) In % of gross final consumption of energy

Source: Eurostat

Graph 11: Renewable energy mix

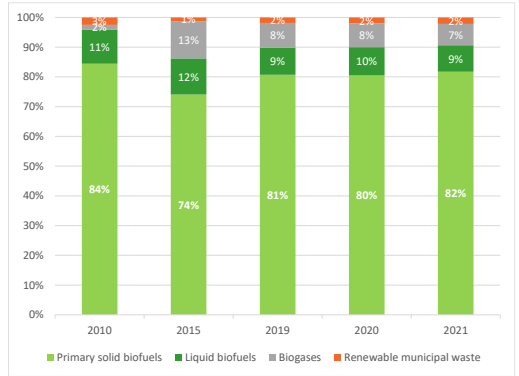


(1) In % of gross final consumption of energy

Source: Eurostat

2. BIOENERGY DEMAND

Graph 12: Bioenergy mix

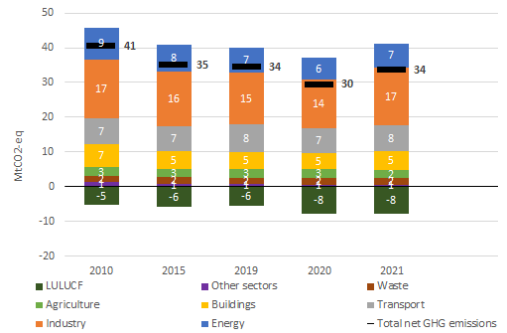


(1) Composition of bioenergy, in % of gross inland consumption of energy.

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.

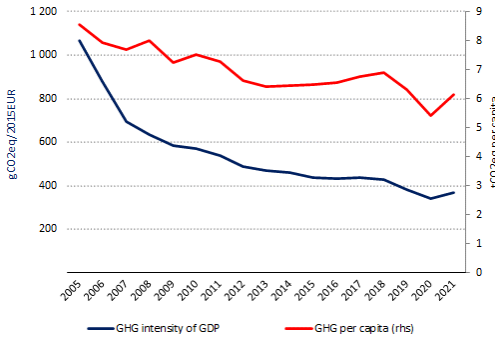
(2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use.

(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.

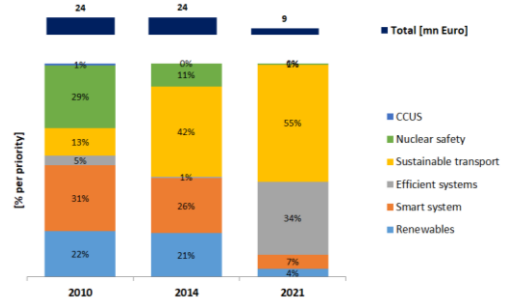
Source: Greenhouse gas inventory 1990-2021 (EEA). Real GDP in 2015-prices (AMECO, European Commission). Population (Eurostat).

- With 370 gCO₂eq/2015EUR, Slovakia lies above the EU average in terms of GHG intensity of GDP.
- With 6 tonnes of CO₂ equivalent per capita, Slovakia 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 \(europa.eu\)](#).

Research, innovation and competitiveness

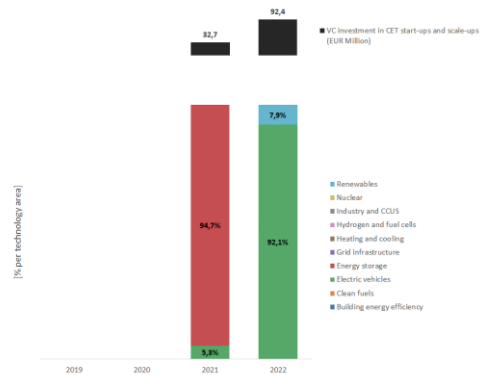
1. INVESTMENT IN R&I

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)

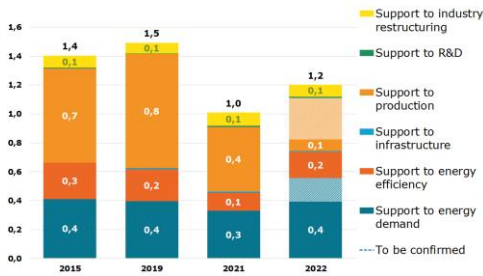


(1) Firms typically use venture capital to expand, break into new markets, and grow faster. Venture capital is essential for the growth of innovative firms and it is key to foster the EU's competitiveness and to strengthen the EU's technology sovereignty in the clean energy sector.

Source: JRC SETIS (2023)

2. ENERGY SUBSIDIES

Graph 17: Energy subsidies by purpose

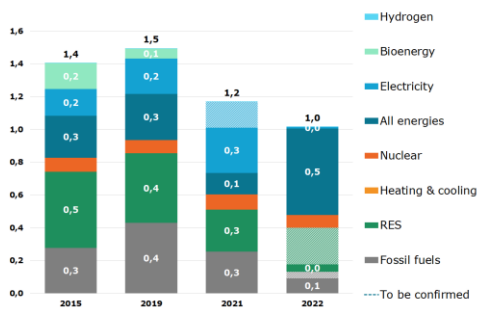


(1) Subsidies in EUR 2022 billion

(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 the economy's reliance on fossil fuels, in particular natural gas in industry and heating, and diversify imports of fossil fuels. Accelerate the deployment of renewables, particularly for wind,

solar, geothermal and renewable gases, in line with relevant sustainability criteria. Simplify permitting and administrative procedures for deploying renewables, including by establishing 'one-stop shops' and 'go-to' areas. Modernise the electricity network and make the procedures for connecting renewables to the grid more efficient and less costly. Accelerate and incentivise deep renovations of public and private buildings, address energy poverty through housing renovations for low-income households, and step up policy efforts aimed at the provision and acquisition of the skills needed for the green transition. ⁽²⁾

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

National Energy and Climate Plan (NECP)

- The draft updated NECP was submitted to the European Commission in August 2023.
- For more information see the dedicated [webpage of the European Commission on the NECPs](#).

Recovery and Resilience Plan (RRP) and REPowerEU chapter

- The Slovak RRP was approved by the Council on 13 July 2021.
- The implementation of the measures proposed in the RRP would allow Slovakia to access **EUR 6.3 billion in grants**.
- The Commission **disbursed so far EUR 1.93 billion to Slovakia. A 3rd payment request** was submitted on 26 September 2023 and it's currently under assessment.
- On 26 April 2023 Slovakia submitted a **request to revise its RRP**, adding a **REPowerEU chapter**.
- The REPowerEU chapter proposed by Slovakia includes six **new reforms**, four **new investments**, and four **scaled-up measures**.
- The amended RRP takes into account the **revised RRF grant allocation** for Slovakia

⁽²⁾ Council of the European Union 9851/1/23

decreased to EUR 6 billion. It includes also the EUR 367 million **REPowerEU grant allocation** and EUR 36.3 million **voluntary transfer from the Brexit Adjustment Reserve**. The **total amount available** is therefore EUR 6.4 billion.

- **46%** of these funds are **allocated** for measures contributing to **climate objectives**, up from the 42% in 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](#).