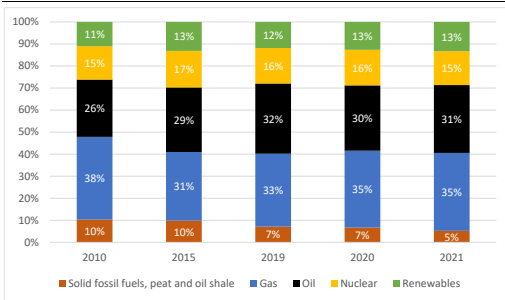


State of the Energy Union 2023 Hungary

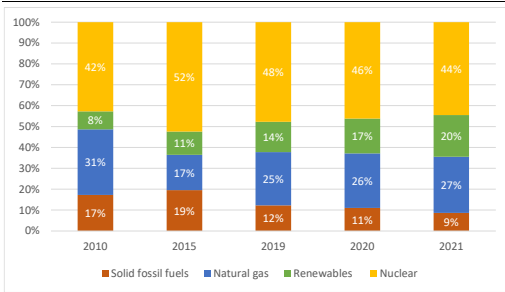
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



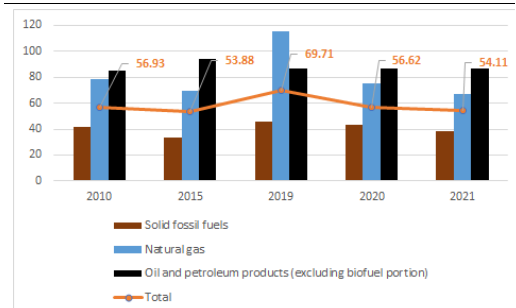
Source: Eurostat

- Hungary's energy mix is **still heavily reliant on fossil fuels**, which in 2021 provided 72% of total energy consumption.
- In 2021, 44% of Hungary's electricity supply was provided by nuclear energy, while natural gas and renewables provided 27% and 20% respectively.
- To prepare for the **widespread electrification** of the economy and the consequent projected increase in demand for electricity, the country intends to **scale up significantly the roll-out of solar power capacity**.

Security, solidarity and trust

1. DIVERSIFICATION OF ENERGY SOURCES AND REDUCTION OF IMPORT DEPENDENCY

Graph 3: Import dependency on fossil fuels



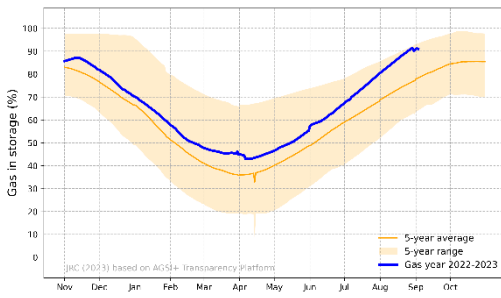
- (1) In percentages
- (2) Combustible renewables and electricity are excluded
- (3) The total amount takes into consideration the energy mix of the country

Source: Eurostat

- Hungary continues to **depend heavily on Russian fossil fuels**, and **efforts to reduce this dependency are progressing too slowly**.
- Hungary continues to depend on Russia for most of its gas imports raising **uncertainties in terms of security of supply**.

2. FLEXIBILITY OF THE ENERGY SYSTEM

Graph 4: Gas storage levels



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

- Hungary has **five underground gas storage facilities** with a total capacity of around **6.3 bcm**.
- On 16 October, the country's storage capacity was filled to **96.86%**.

Integrated internal energy market

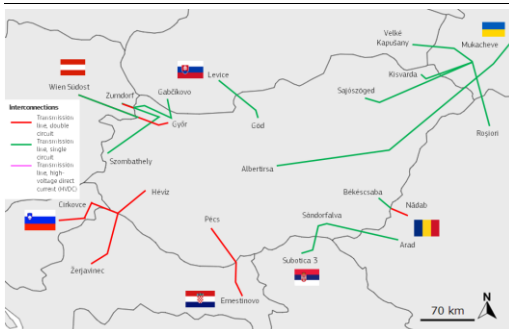
1. ELECTRICITY INTERCONNECTIVITY

2023	2030 target
48.00%	At least 15%

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

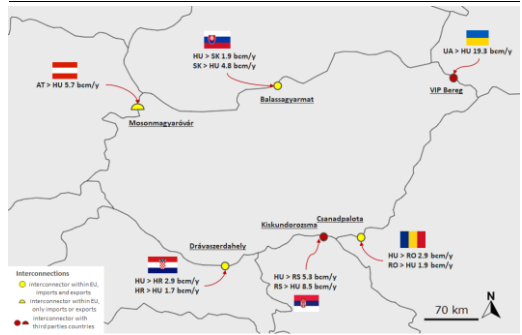
2. ENERGY TRANSMISSION INFRASTRUCTURE

Map 1: Cross-border electricity interconnections



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

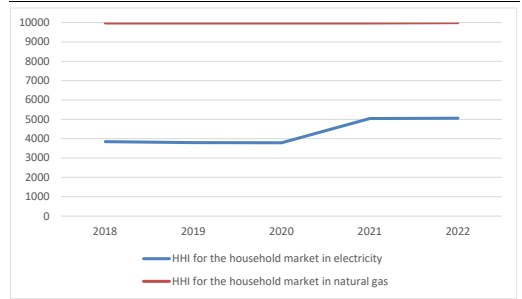
Map 2: Cross-border gas interconnections



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



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

- In 2022 in Hungary, the market share of the three largest suppliers reached 100% for both electricity and natural gas.

Rollout of electricity smart meters

- Hungary had a very low electricity smart meter rollout, with 7.3% of household consumers being equipped with smart meters in 2022. 80% of consumers are planned to be equipped with smart meters later than 2024,

however, Hungary has no national law stating this. ⁽¹⁾

4. ENERGY POVERTY AND JUST TRANSITION

Table 1: Energy poverty

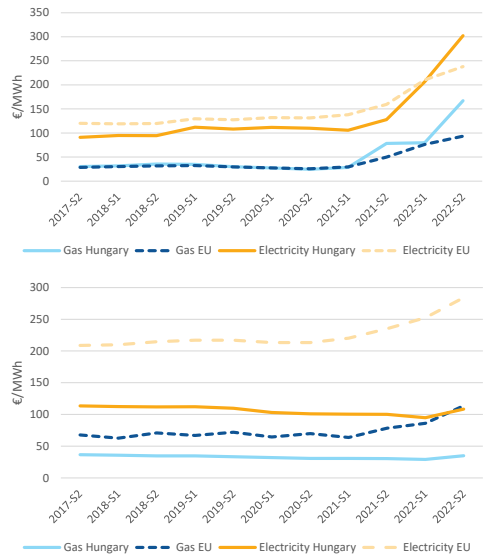
	Hungary			EU		
	2020	2021	2022	2020	2021	2022
Arrears on utility bills (households %)	10.4%	9.7%	8.6%	6.5%	6.4%	6.9%
inability to keep home adequately warm (household %)	4.2%	5.4%	4.7%	7.5%	6.9%	9.3%
Population living in dwelling with presence of lead, damp and rot (population %)	20.4%	:	:	14.8%	:	:

Source: Eurostat

- Just transition plan:** The Territorial Just Transition Plans (TJTP) outline the transition away from coal-based energy production in the single largest coal region in North-Hungary. The plans set out how the Just Transition Fund (JTF), with a national allocation of 261€ million will support the development of renewable energy, economic diversification, and modernisation of industries. Coal phase-out commitment 2025.

5. ENERGY PRICES

Graph 6: Energy retail prices for industry (top) and households (bottom)



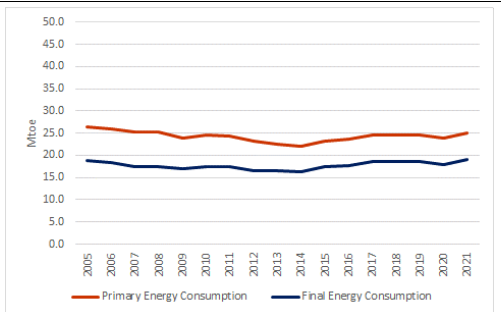
- (1) On electricity, the band consumption is for DC households and ID for industry
- (2) On gas, the band consumption is D2 for households and I4 for industry

Source: Eurostat

Energy efficiency

1. ENERGY EFFICIENCY

Graph 7: Primary and final energy consumption



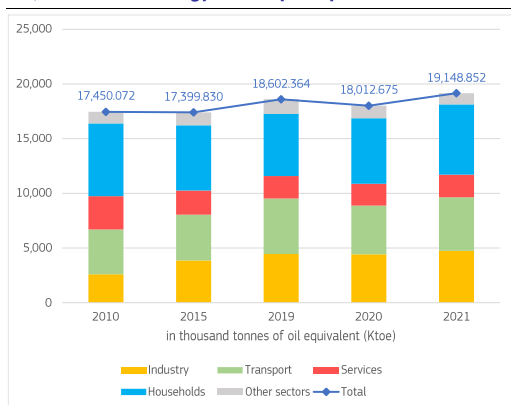
Source: Eurostat

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

- In 2021, Hungary's **Primary Energy Consumption (PEC)** amounted to 24.93 Mtoe, 1.5% higher than in 2019, while its **Final Energy Consumption (FEC)** amounted to 19.15 Mtoe, 2.9% higher than in 2019, to a large extent due to the COVID-19 crisis recovery.

- In 2021, the final energy consumption of residential buildings **decreased by 3.91%** compared to 2019.
- The sales of heat pumps amounted to **15.433 units** in 2022 representing an increase of **110%** compared to 2021, as per the European Heat Pump Association (EHPA).

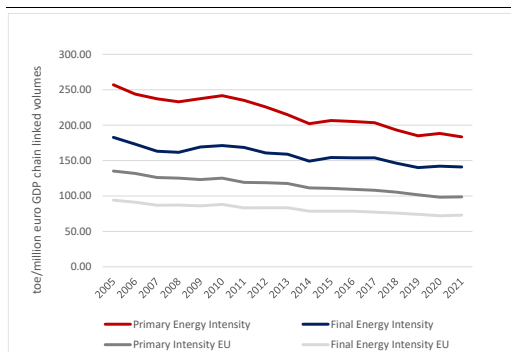
Graph 8: **Final energy consumption per sector**



(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

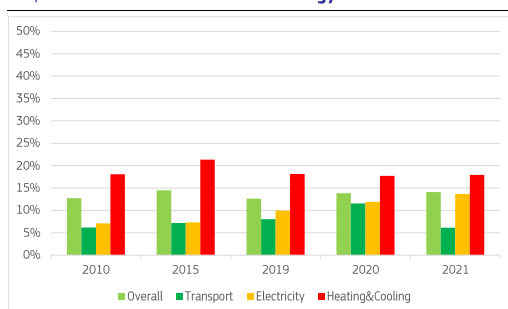
2. ENERGY SAVINGS IN BUILDINGS

- In 2020, there were **2.77 million** of **residential buildings** in Hungary.
- As per its 2020 Long Term Renovation Strategy (LTRS), **Hungary** targets to achieve **-20%** of energy savings **by 2030** compared to **2018** in the building sector.

Decarbonisation and climate action

1. SECTORAL SHARE OF RENEWABLE ENERGY

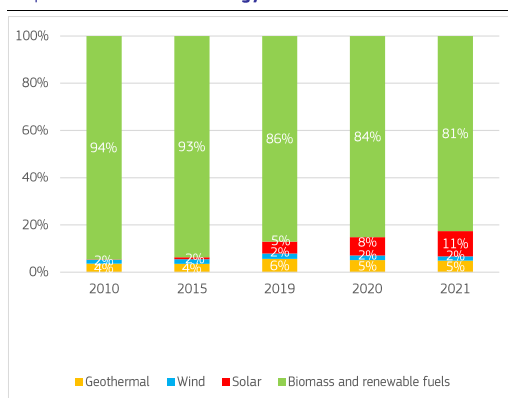
Graph 10: **Share of renewable energy sources**



(1) in % of gross final consumption of energy

Source: Eurostat

Graph 11: **Renewable energy mix**

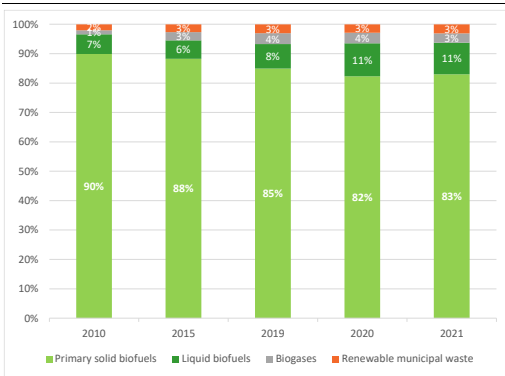


(1) in % of gross final consumption of energy

Source: Eurostat

2. BIOENERGY DEMAND

Graph 12: Bioenergy mix

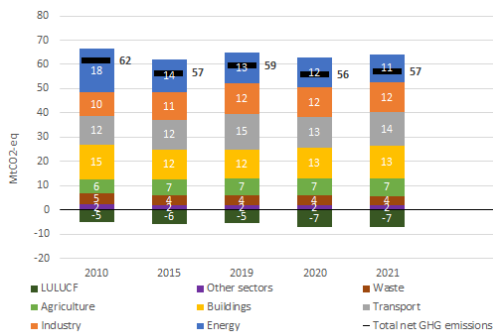


(1) Composition of bioenergy, in % of gross inland consumption of energy.

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.

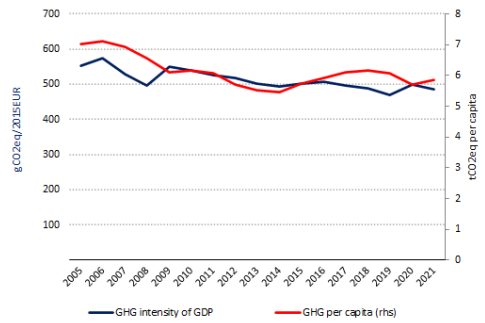
(2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use.

(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).

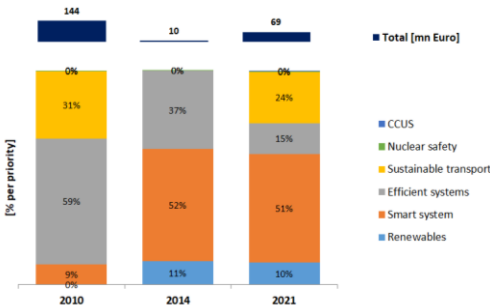
- With 485 gCO₂eq/2015EUR, Hungary lies above the EU average in terms of GHG intensity of GDP.
- With 6 tonnes of CO₂ equivalent per capita, Hungary is below the EU average in terms of GHG emissions per capita.
- For more detailed information on country profiles see [Progress made in cutting emissions \(europea.eu\)](https://europea.eu).

Research, innovation and competitiveness

1. INVESTMENT IN R&I

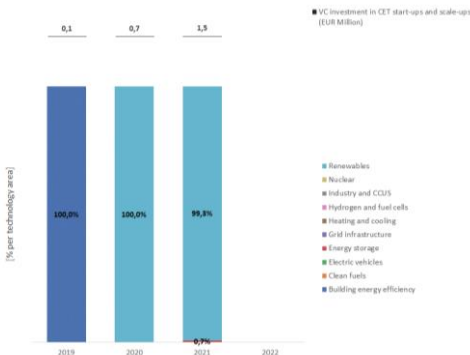
- Public investment in research and innovation (R&I) in Energy Union priorities () increased from 0.009% in 2014 to 0.045% in 2021 (share of GDP).

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)

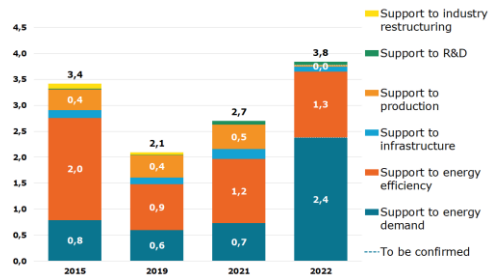


- Firms typically use venture capital to expand, break into new markets, and grow faster. Venture capital is essential for the growth of innovative firms and it is key to foster the EU's competitiveness and to strengthen the EU's technology sovereignty in the clean energy sector.

Source: JRC SETIS 2023

2. ENERGY SUBSIDIES

Graph 17: Energy subsidies by purpose

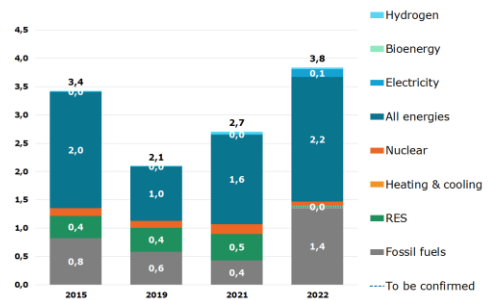


(1) Subsidies in EUR 2022 billion

(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 accelerating the deployment of renewables, including wind energy, geothermal and sustainable biomethane, in particular by streamlining the permitting procedures, while conducting regular environmental impact assessments and by creating a supportive and predictable regulatory environment. Phase out subsidies for fossil fuels. Reform balancing energy market rules and tariff setting to allow for cost recovery and an optimum use of the grid and, where necessary, upgrade the electricity infrastructure, including grid and storage 28 capacities. Diversify imports of fossil fuels to significantly decrease dependence on Russia including by strengthening interconnections with other countries. Improve energy efficiency, in particular in buildings, and continue efforts to reduce overall gas consumption. Adjust the current system of regulated energy prices to encourage energy saving while providing targeted support for low-income households. 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 September 2023.
- For more information see the dedicated [webpage of the European Commission on the NECPs](#).

⁽²⁾ Council of the European Union 9842/1/23

Recovery and Resilience Plan (RRP) and REPowerEU chapter

- **The Hungarian RRP was approved by the Council on 15 December 2022.**
- The implementation of the measures proposed in the RRP would allow Hungary to access **EUR 7.2 billion in grants**.
- **48.1%** of these funds are **allocated** for measures contributing to **climate objectives**.
- The Commission has not yet disbursed any financial contribution to Hungary. No payment request has been submitted so far.
- On 31 August 2023 Hungary submitted a **request to revise its RRP**, adding a **REPowerEU chapter**.
- The amended RRP takes into account the **revised RRF grant allocation** for Hungary, which decreased to EUR 5.8 billion. It includes also the EUR 0.7 billion **REPowerEU grant allocation**. Hungary has also requested EUR 3.9 billion in **loans**. The **total amount available** is therefore EUR 10.4 billion.
- For more information visit the [Recovery and Resilience Scoreboard](#).