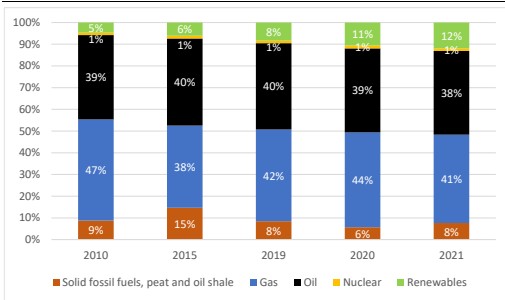


State of the Energy Union 2023 Netherlands

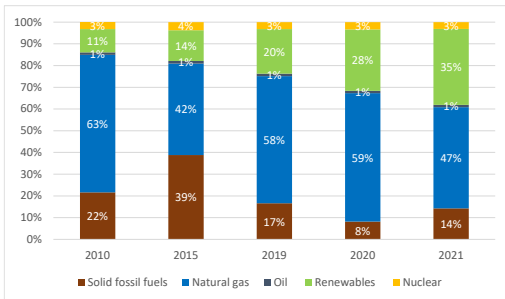
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



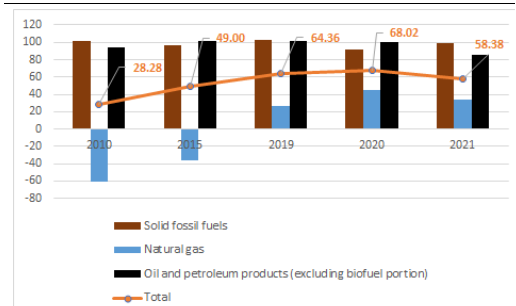
Source: Eurostat

- In 2021, fossil fuels still played a significant role in the Netherlands' energy mix. **Gas provided the highest share of the energy mix at 41%, followed by oil at 38%. Renewables came third at 12%.**

Security, solidarity and trust

1. DIVERSIFICATION OF ENERGY SOURCES AND REDUCTION OF IMPORT DEPENDENCY

Graph 3: Import dependency on fossil fuels



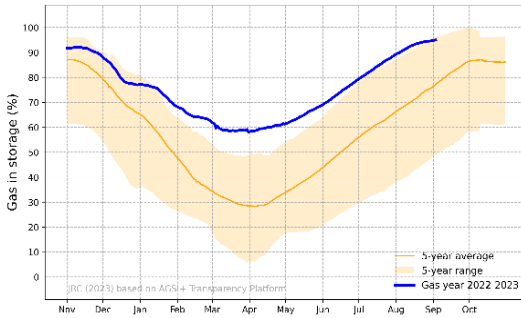
- In percentages
- Combustible renewables and electricity are excluded
- The total amount takes into consideration the energy mix of the country

Source: Eurostat

- The Netherlands is highly dependent on imported fossil fuels. Before Russia invaded Ukraine, the Netherlands **had exposure to Russian gas (30%) and oil (26%), close to the EU average.** The Netherlands still imports LNG from Russia (2 bcm in 2022).

2. FLEXIBILITY OF THE ENERGY SYSTEM

Graph 4: Gas storage levels



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

- The Netherlands has **six underground storage facilities** with a total capacity of **13.1 bcm**.
- On 16 October, the country's storage capacity was filled to **97.72%**.

Integrated internal energy market

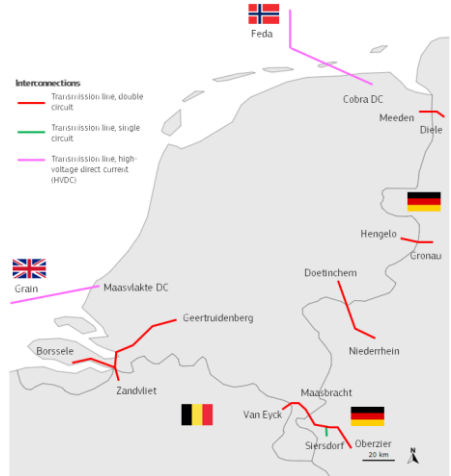
1. ELECTRICITY INTERCONNECTIVITY

2023	2030 target
11.97%	At least 15%

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

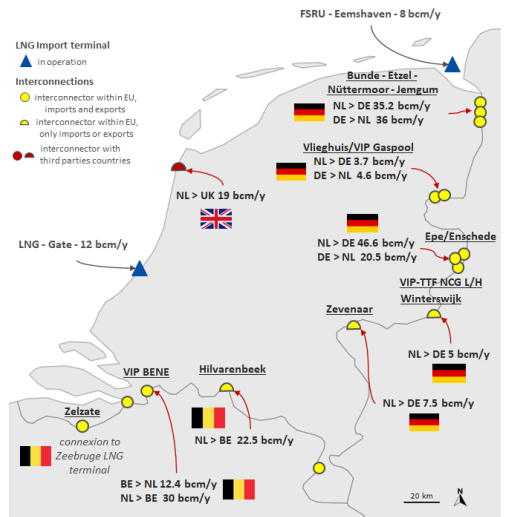
2. ENERGY TRANSMISSION INFRASTRUCTURE

Map 1: Cross-border electricity interconnections



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

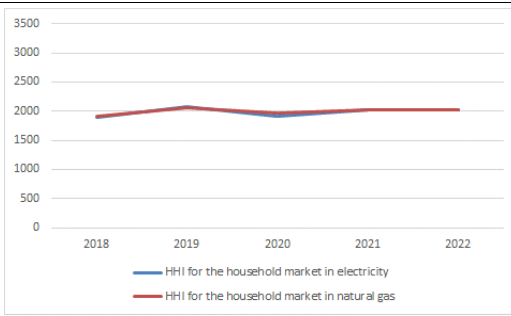
Map 2: Cross-border gas interconnections



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 the Netherlands, the market share of the three largest suppliers reached 71% for electricity, and 71.2% for natural gas.⁽¹⁾

Rollout of electricity smart meters

- The Netherlands had a high electricity smart meter roll out, with 88.7 % of household consumers being equipped with smart meters in 2022.⁽²⁾

4. ENERGY POVERTY AND JUST TRANSITION

Table 1: Energy poverty

	Netherlands			EU		
	2020	2021	2022	2020	2021	2022
Arrears on utility bills (households %)	1.5%	1.2%	1.5%	6.5%	6.4%	6.9%
Inability to keep home adequately warm (household %)	2.4%	2.4%	5.3%	7.5%	6.9%	:
Population living in dwelling with presence of lead, damp and rot (population %)	14.8%	:	:	14.8%	:	:

Source: Eurostat

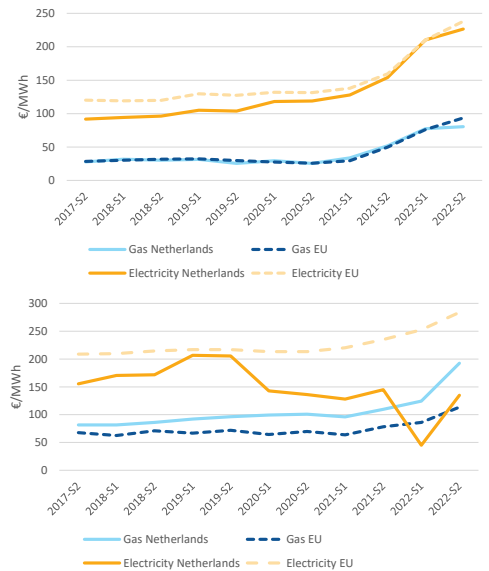
- Just transition plan:** The Dutch Territorial Just Transition Plans (TJTP) outline the transition away from fossil fuels and carbon-intensive industries in six regions: Groningen and Emmen, IJmond, Groot-Rijnmond, Zeeuws-Vlaanderen, West-Noord-Brabant, and Zuid-Limburg. The plans set out how the Just Transition Fund (JTF), with a national allocation

⁽¹⁾ CEER 2023 out of ACER’s Energy Retail and Consumer Protection 2023 Market Monitoring Report.

of 623€ million, will support the development of green technologies, renewable energy, energy efficiency and reskilling of the workforce. Coal phase-out commitment 2030.

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.

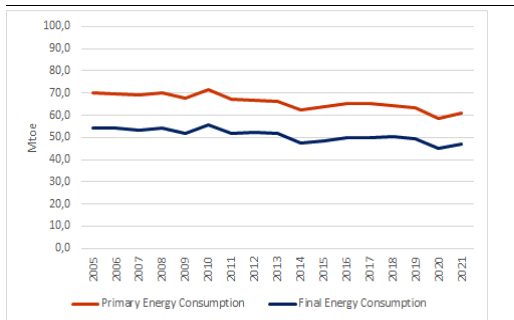
Source: Eurostat

⁽²⁾ ACER, CEER. Energy Retail and Consumer Protection, 2023 Market Monitoring Report.

Energy efficiency

1. ENERGY EFFICIENCY

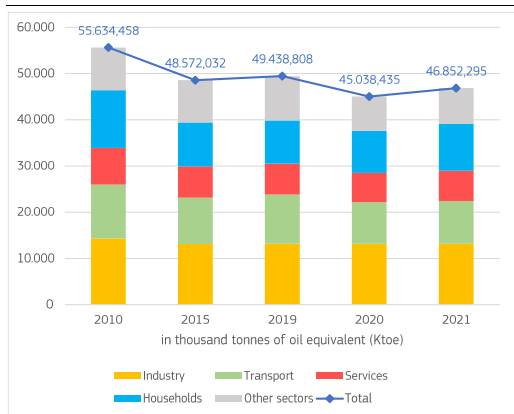
Graph 7: Primary and final energy consumption



Source: Eurostat

- In 2021, the Netherlands' **Primary Energy Consumption (PEC)** amounted to 60.83 Mtoe, 4.3% lower than in 2019, while its **Final Energy Consumption (FEC)** amounted to 46.85 Mtoe, 5.2% lower than in 2019, despite the COVID-19 crisis recovery.

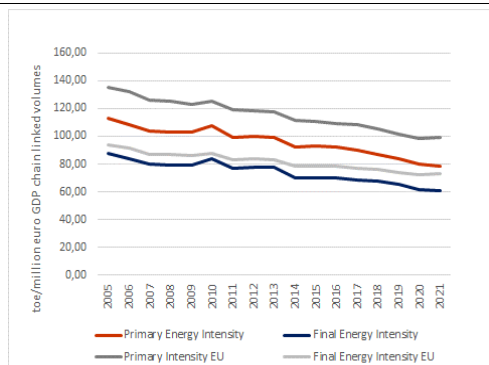
Graph 8: Final energy consumption per sector



(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

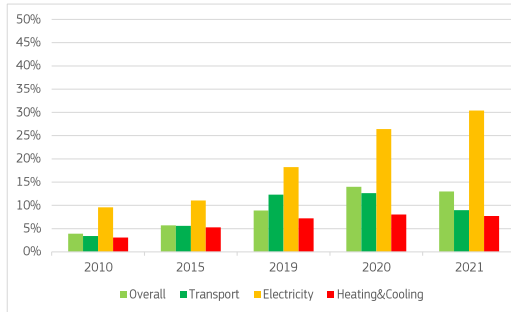
2. ENERGY SAVINGS IN BUILDINGS

- In 2020 there were **7.8 million of dwellings** in **Netherlands**.
- As per its 2020 Long Term Renovation Strategy (LTRS), **Netherlands** targets to achieve **-13%** of energy savings **by 2030** compared to **2020** in the building sector.
- In 2021, the final energy consumption of residential and service sectors **increased by 0.45%** compared to 2019.
- The sales of heat pumps amounted to **125 720 units** in 2022 representing an increase of **77%** compared to 2021, as per the European Heat Pump Association (EHPA).

Decarbonisation and climate action

1. SECTORAL SHARE OF RENEWABLE ENERGY

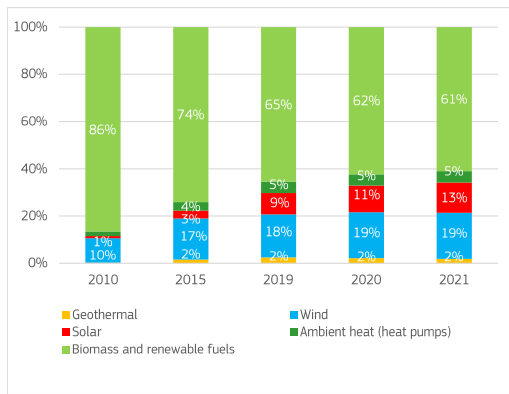
Graph 10: Share of renewable energy sources



(1) In % of gross final consumption of energy

Source: Eurostat

Graph 11: Renewable energy mix

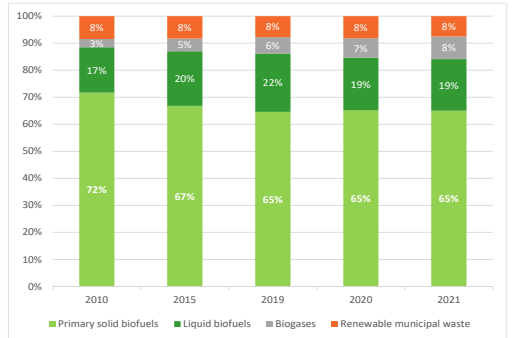


(1) In % of gross final consumption of energy

Source: Eurostat

2. BIOENERGY DEMAND

Graph 12: Bioenergy mix

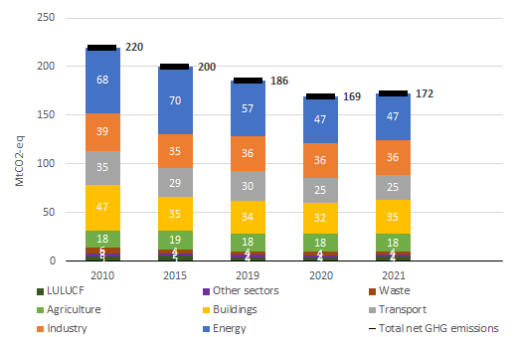


(1) Composition of bioenergy, in % of gross inland consumption of energy.

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.

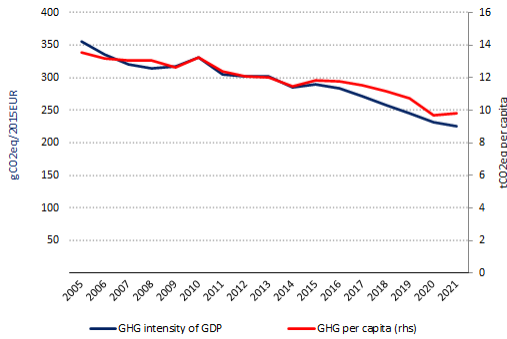
(2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use.

(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 225 gCO₂eq/2015EUR, the Netherlands lie below the EU average in terms of GHG intensity of GDP.
- With 10 tonnes of CO₂ equivalent per capita, the Netherlands are above the EU average in terms of GHG emissions per capita.
- For more detailed information on country profiles see [Progress made in cutting emissions \(europa.eu\)](#).

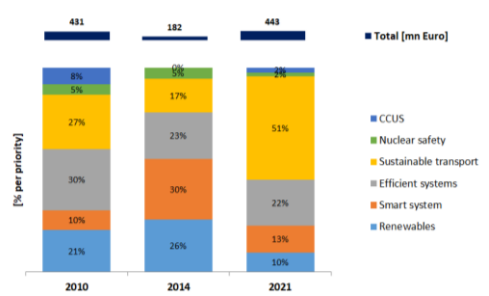
Research, innovation and competitiveness

1. INVESTMENT IN R&I

- Public investment in research and innovation (R&I) in Energy Union priorities⁽³⁾ increased from 0.027% in 2014 to 0.052% in 2021 (share of GDP).

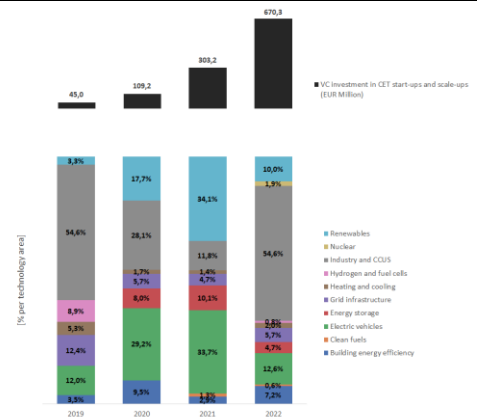
⁽³⁾ Renewables, smart system, efficient systems, sustainable transport, CCUS and nuclear safety, COM(2015) 80 final ('Energy Union Package').

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)**

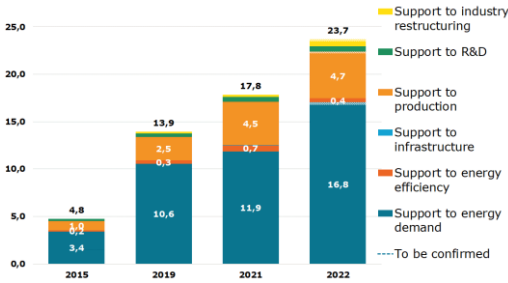


(1) Firms typically use venture capital to expand, break into new markets, and grow faster. Venture capital is essential for the growth of innovative firms and it is key to foster the EU's competitiveness and to strengthen the EU's technology sovereignty in the clean energy sector.

Source: JRC SETIS (2023)

2. ENERGY SUBSIDIES

Graph 17: Energy subsidies by purpose

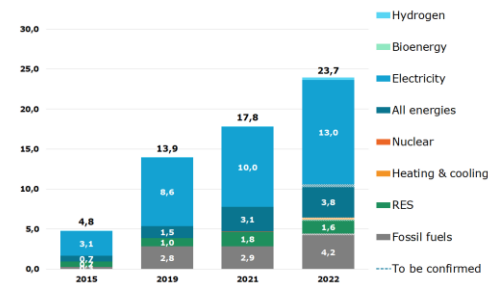


(1) Subsidies in EUR 2022 billion

(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 reliance on fossil fuels by accelerating the deployment of renewables, improving framework conditions to boost investment in the expansion of electricity transmission and distribution grids, extending and accelerating energy efficiency

measures to reduce energy consumption, in particular in the built environment. Support the transition towards sustainable agriculture.⁽⁴⁾

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

National Energy and Climate Plan (NECP)

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

Recovery and Resilience Plan (RRP) and REPowerEU chapter

- **The Dutch RRP was approved by the Council on 4 October 2022.**
- The implementation of the measures proposed in the RRP would allow Netherlands to access **EUR 4.7 billion in grants**.
- The Commission has not disbursed so far funds to Netherlands. No payment request has been submitted so far.
- On 6 July 2023 Netherlands submitted a **request to revise its RRP**, adding a **REPowerEU chapter**.
- The amended RRP takes into account the **revised RRF grant allocation** for Netherlands slightly increased to EUR 4.7 billion. It includes also the EUR 454 million **REPowerEU grant allocation** and EUR 280 million **voluntary transfer from the Brexit Adjustment Reserve**. The **total amount available** is therefore EUR 5.4 billion.
- The REPowerEU chapter proposed by Netherlands includes one **new reform**, and one **scaled-up measure**.
- **55%** of these funds are **allocated** for measures contributing to **climate objectives**, up from the 48% in the original plan.

⁽⁴⁾ Council of the European Union 9845/1/23.

- The **amended RRP, including the REPowerEU chapter, was approved by the Council** on 17 October 2023.
- For more information visit the [Recovery and Resilience Scoreboard](#)