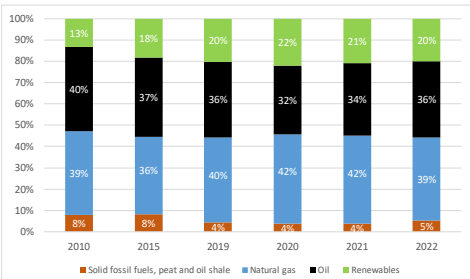




REPowerEU Two Years on Italy

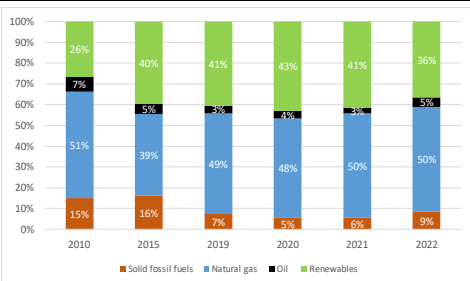
Key energy figures

Graph 1: Energy mix



Source: Eurostat

Graph 2: Electricity mix



Source: Eurostat

Save energy

1. KEY ENERGY SAVINGS MEASURES

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

- **the tax deduction schemes** for building renovations, energy efficiency and renewable measures progressed in 2023. At the end of 2023, **SuperBonus 110% scheme** for residential buildings **delivered up to**

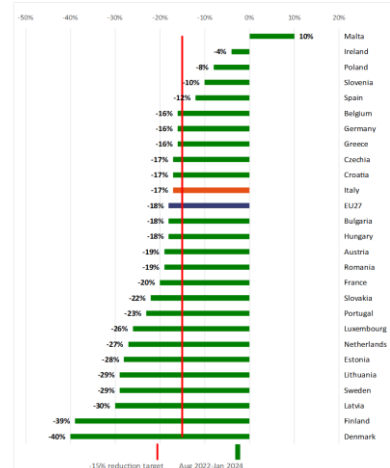
494 406 energy renovations (26.7% of which are multi-apartment buildings)⁽¹⁾.

- **Italy's national energy saving obligation system, white certificate scheme**, delivered in 2023 up to 0.46 Mtoe of final energy savings, increasing by 33% the certified energy savings obligations compared to the year 2022⁽²⁾.
- **Behavioural, support and mandatory energy saving measures in 2022 have delivered 6.1 bcm of natural gas savings** (8% of the total amount of gas consumed in Italy in 2021)⁽³⁾.

2. GAS DEMAND REDUCTION

Italy has reduced its gas consumption by **17%** in the period **August 2022 – January 2024**, below the decrease achieved at EU level (18%) but surpassing the 15% voluntary gas demand reduction agreed at the EU level⁽⁴⁾.

Graph 3: Natural gas demand reduction (August 2022 – January 2024)



(1) Cyprus does not use natural gas
Source: Eurostat, DG ENER calculations

(1) ENEA monthly reports, March 2024 ([Link](#)). At the end of 2022, most recent annual report ([Link](#)), the energy renovations delivered under SuperBonus achieved 0.975 Mtoe of final energy savings.
(2) GSE, 2023 Annual Report White Certificates ([Link](#)).

(3) Ministry of the Environment and Energy Security, Piano Nazionale di Contenimento dei Consumi di Gas Naturale, 2022. Available at: [Link](#).
(4) Council Regulation (EU) 2023/706 of 30 March 2023, amending Regulation (EU) 2022/1369

Diversify energy supplies

1. KEY ACTIONS

Energy security is an important aspect in Italian energy policy, with imported fossil fuels representing the bulk of Italy's energy mix. Italy is still very dependent on fossil fuels, as they made up 79% of the gross available energy in the country in 2022. Historically, Russia was Italy's largest supplier, accounting for 40% of the gas imported in 2021 (followed by Algeria and Qatar).

2. GAS INFRASTRUCTURE DEVELOPMENTS

In 2022, Italy had already managed to substantially reduce this dependency to 19% and aims to phase out Russian gas by 2025. To support energy diversification, Italy has commissioned a new floating storage regasification Unit (FSRU) in Piombino with a capacity of 5bcm/y and an additional unit is expected to start operating in Ravenna by the end of 2024 with a 5bcm/y capacity⁽⁵⁾. Further investment is planned to phase out Russian gas imports and support diversification, namely the construction of the Adriatica Line and two other projects for increasing Italy's export potential to Austria. The TAP expansion and the Matagiola-Massafra pipeline also contribute to the diversification objective.

Map 1: Cross-border gas infrastructure



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

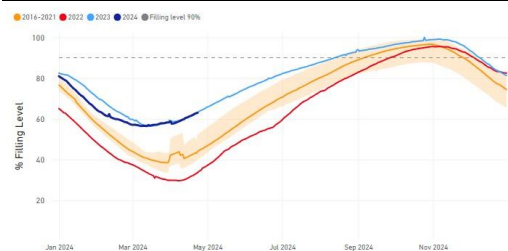
⁽⁵⁾ The draft updated NECP also mentions the upgrade of 3 LNG terminals (Panigaglia by 2 bcm, Livorno by 1 bcm and Rovigo by 2 bcm), as well as a potential 5.7 bcm/year of biomethane production by 2030.
⁽⁶⁾ International Energy Agency (2022), Italy Natural Gas Security Policy – Analysis - IEA. ([Link](#))

3. GAS STORAGE

The total natural gas storage in Italy in 2022 stood at 19.04 bcm⁽⁶⁾. Italy operates 15 gas storage sites, of which 13 are active underground storage sites (with a combined working capacity of 195.3 TWh).

Italy fulfilled its gas storage obligations last winter, reaching 99% by 1 November 2023⁽⁷⁾, and ended the winter season with a storage filled at 57.8% by 1 April 2024.

Graph 4: Storage levels in Italy



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 **Italy** aggregated gas demand of **8.32 bcm** in 2023 under the EU Energy Platform. This represents the equivalent of 12.11% of the country's yearly gas consumption.

⁽⁷⁾ 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.

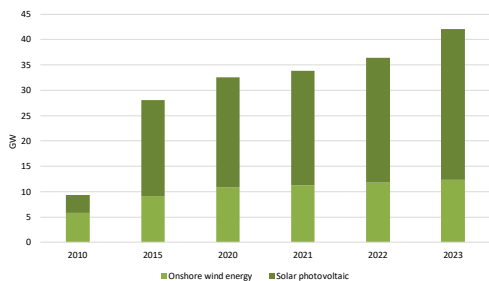
Produce clean energy

1. INSTALLED RENEWABLE ELECTRICITY CAPACITY, IN WIND AND SOLAR

In **2023**, Italy installed around 5.7 GW of renewable electricity capacity, bringing the total to **65.2 GW** (vs. 56.9 GW in 2021).

In **2023**, the annual growth rate of installed renewables power capacity rose to **9.5%** compared to 2.5% in 2021⁽⁸⁾.

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, Italy installed 0.5 GW of wind power capacity (vs. 0.4 GW in 2021).
- (3) In 2023, Italy installed 5.2 GW of solar photovoltaic capacity (vs. 0.9 GW in 2021).

Source: IRENA, Renewable capacity statistics, 2024

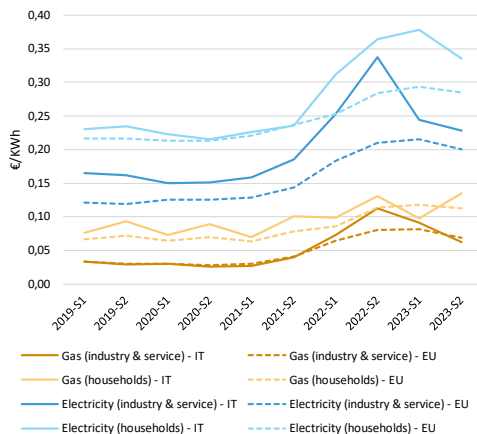
2. ELECTRICITY INFRASTRUCTURE DEPLOYMENT

With the need to prioritize further infrastructure investments, Italy is upgrading its electricity network to accommodate a higher share of renewable energy. In this sense, Italy will carry out substantial investment thanks to its recovery and resilience plan (RRP), to facilitate the optimal integration of internal networks and the absorption of renewable energy sources into the grid. In terms of cross-border electricity networks, the deployment of interconnections with Austria and Slovenia will help to increase the nominal capacity of the existing electricity interconnection with these countries. Besides the RRP, at the western border, the electricity interconnector between France and Italy, the Piemonte-Savoia S.r.l, became fully operational in August 2023 and increased the exchange capacity with France by 40%⁽⁹⁾. Finally, the electricity link between Sicily and Tunisia will facilitate increased energy production from renewable sources in the Mediterranean region.

⁽⁸⁾ International Renewable Energy Agency (2024). Renewable capacity statistics 2024.

Energy price developments

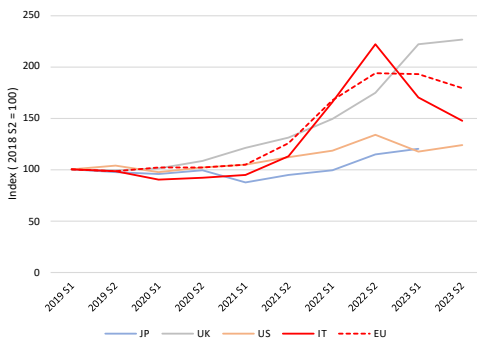
Graph 6: **Italy's energy retail prices for households and industry & service**



- (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 IT), 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

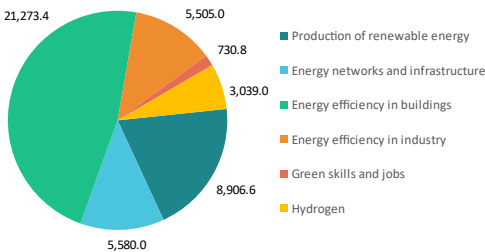
⁽⁹⁾ An increase by 1200 MWA, considering that Italy started from a capacity of 3150 MWA.

Smartly combine investments and reforms in the RRP

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

- Approved by Council: 8 December 2023
- Total amount: EUR 194.4 billion
- Amount allocated for energy: EUR 45.0 billion⁽¹⁰⁾
- Climate tagging: RRP: 39 %; REPowerEU chapter: 68.3%

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



Source: European Commission

Tangible results: reforms & investments

- **Energy efficiency in buildings:** Strengthening of the Ecobonus and Sismabonus for energy efficiency and building safety, e.g. completing building renovation for at least 17 000 000 square meters which result in primary energy savings of at least 40% and increasing at least two categories in the energy efficiency certificate.
- **Renewables:** Streamline permitting for renewable energy deployment, strengthened by the reform on the 'Single Text', a single primary legislative act collecting all existing norms on renewable energy deployment and superseding all relevant past legislation.
- **Infrastructure:** In its REPowerEU chapter, Italy invests in the construction of the 'Tyrrhenian link', and in particular of the 'East interconnection line' between Sicily and Campania, by financing the installation of 514 km of the point-to-point direct current (HVDC) submarine cables between Eboli and Caracoli.
- **Energy efficiency in industry:** Support the energy transition of production processes towards an energy efficient, sustainable and renewable-based model of production, leading to 0.4 Mtoe of energy savings in final energy consumption between 2024 – 2026.

⁽¹⁰⁾ EUR 420 million of gas infrastructure are included in "Energy networks and infrastructure".

- **Hydrogen:** Administrative simplification and reduction of regulatory barriers to hydrogen deployment, e.g. fast-track authorization procedures to build and operate a small scale hydrogen production plant (for electrolyser facilities of less than 1-5 MW).

Highlights of the National Energy and Climate Plan

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

Italy remains one of the leading clean technology markets, hosting a substantial number of solar PV and wind energy manufacturing facilities. Regarding manufacturing capacity for solar PV components, more than 22% of building integrated photovoltaics come from Italy. Italy is between the top two biggest producers within the EU and has companies listed among the leading EU producers of backsheets and foils. Italian companies are also leading modules manufacturers, with one actor in the Italian electricity market and a gigafactory in Sicily, whose expansion is set to result in a 15-fold increase in its production capacity to 3 GW per year from the current 200 MW. And two other hubs of the PV industry are located in the Veneto region, which can each achieve a production capacity of 1 GW/year. The Italian RRP allocates nearly EUR 90 million to the PV gigafactory in Sicily, which is now underway, highlighting how this project fundamentally contributes to the European strategy to build an increasingly autonomous renewable supply chain. In Northern Italy, one company comes in fourth position at EU level (after Spain, Germany and Austria) but is leader in the national market with production of inverters reaching 7 GW. For wind, Italy has manufacturing facilities for onshore towers and blades, operating in Lombardy and Apulia. Component production facilities are located between Lombardy and the

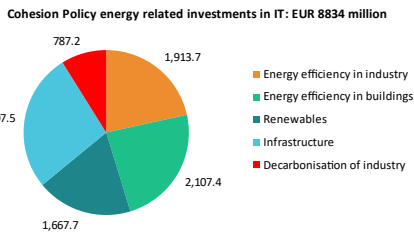
Veneto region. At the end of 2017, the ex-Whirlpool industrial site in Teverola was converted with the aim of creating the first Mediterranean cluster to produce lithium batteries. In 2019, the European Commission approved the construction of a 8GWh/year gigafactory with an integrated pilot line for end-of-life battery recycling, as an Important Project of Common European Interest (IPCEI). In 2022, a second plant in Teverola received funding from the Ministry of Economic Development and the IPCEI fund amounting to EUR 417m to launch a start-up to produce lithium-ion batteries. Other lithium-ion manufacturing facilities for the automotive sector have been announced in 2022 in Termoli, with a forecast production of 40 GWh, and in Ivrea with a gigafactory planned to open in 2025 with 3 000 jobs and a productive capacity up to 45 GWh/year. Important actors in the electrolyser sector have launched manufacturing units for AEM (Anion Exchange Membrane) and alkaline electrolysers. The facility in San Miniato has a production capacity of 300 MW/year. With additional investment, it aims to reach a total annual production capacity equivalent to 1.3 GW.

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⁽¹¹⁾

(11) <https://cohesiondata.ec.europa.eu/d/hgyj-qyin>