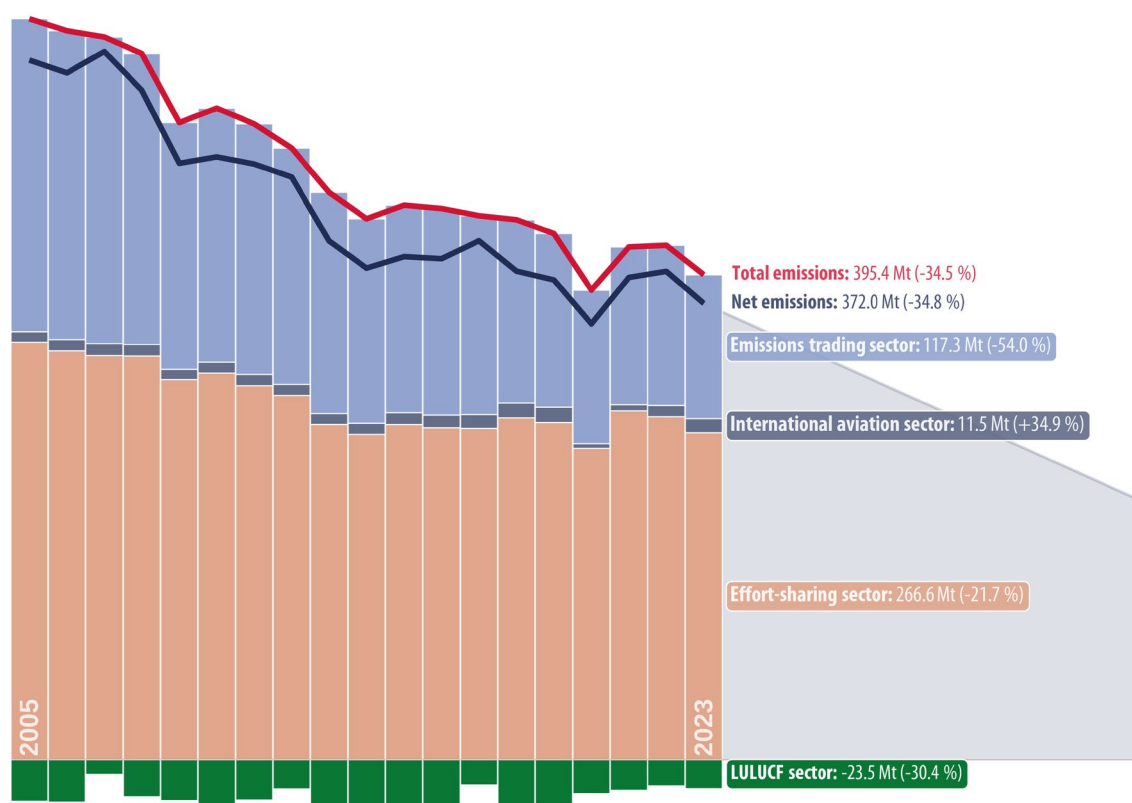


Italy's climate action strategy

Italy's long-term climate strategy sets out pathways to reach climate neutrality by 2050 (see trajectory in Figure 1). Italy accounts for 12.5 % of the EU's net greenhouse gas (GHG) emissions and achieved a net emissions reduction of 34.8 % from 2005 to 2023, greater than the EU average reduction of 30.5 % over the same period. Emissions from sectors under the EU emissions trading system (ETS) dropped by 54 %. Italy's land use, land-use change and forestry (LULUCF) sector has been a carbon sink throughout the same period. For the effort-sharing sectors, Italy over-achieved its targets for 2020, but may find it challenging to deliver on the updated 2030 obligations. In August 2023, Italy proposed a REPowerEU chapter to the country's recovery and resilience plan, increasing its climate spending. Italy submitted its [final](#) updated national energy and climate plan (NECP) on 1 July 2024.

In a 2023 [survey](#), 45 % of Italians, compared with a 46 % EU average, identified climate change to be one of the four most serious problems facing the world. Around half of the respondents expect the EU (51 %) and/or national government (46 %) to tackle climate change, while only 20 % find it to be a personal responsibility.

Figure 1 – Italy's greenhouse gas emissions in million tonnes (Mt), 2005–2023



Data source: European Environment Agency ([EEA](#)), 2024.

This briefing is one in a series covering all EU Member States.



Italy's starting point

Italy aims for climate neutrality by 2050, a target set out in its [long-term strategy](#) from February 2021. The March 2022 national [ecological transition plan](#) includes policies on adaptation to climate change, climate neutrality, biodiversity and ecosystems, bioeconomy, circular economy and pollution.

Italy met its 2020 EU GHG emissions, share of renewable energy and energy consumption targets. The country's over-achievement in all the target areas [helped deliver](#) the 2020 EU-level goals and make up for countries that lacked progress in those areas. Between 2005 and 2023, Italy succeeded in reducing emissions in all sectors. The deepest GHG emissions reductions were achieved in the industry and energy sectors. More modest reductions were achieved in agriculture, transport and waste management. The LULUCF sector has delivered carbon removals throughout the 2005–2023 period, with a decreasing trend since 2019. Emissions per capita in Italy reached 6.7 tonnes of carbon dioxide equivalent in 2023 and stayed below the EU average of 7.2 tonnes. This is a 36 % decrease since 2005, compared with a 32 % decrease at EU level. In addition, the Italian economy's carbon intensity was reduced by 37 % between 2005 and 2023, and is 5.8 % below the EU average.

The Council's 2024 [country-specific recommendations](#) for Italy note the potential for the country's tax system to advance the green transition, in particular by linking taxation to the CO₂ emissions of energy sources and vehicles, including company cars. The Commission's [country report](#) points out that Italy is highly exposed to climate change impacts and faces some of the highest climate-related economic losses, reaching more than €50 per inhabitant in 2022. It calls for a strengthened institutional climate adaptation framework to manage potential losses from climate impacts and close the climate protection gap, and for more attention to sustainable water and soil management.

Italy received an overall low ranking in the 2025 [Climate Change Performance Index](#) (CCPI). The CCPI ranks countries based on their climate protection performance using primarily quantitative data, with experts providing qualitative evaluation of a country's forward-looking climate policies. Italy received a 'medium' rating on indicators for GHG emissions and energy use, and a 'low' rating for renewable energy and its national and international climate policies. The experts are critical of new fossil gas infrastructure and a lack of progress on renewable energy.

Climate action governance

The Italian Constitution was [amended](#) in February 2022 to include the concept of sustainable development, making explicit reference to future generations. The Italian state adopts laws and regulations concerning environmental protection, including climate, unless regulatory and administrative competences are delegated to or shared with the country's regions. The December 2019 [Climate Decree](#) established a national strategic policy to tackle climate change and air quality, in order to comply with EU obligations and take measures regarding sustainable mobility, reforestation, and environmental data, in line with the European Green Deal. Italy has neither a dedicated climate law nor a dedicated scientific advisory council on climate change.

The [Interministerial Committee](#) for Economic Planning and Sustainable Development, established in 2021, is tasked with mainstreaming sustainability across government policies. Francesco Corvaro was appointed as [Special Envoy for Climate Change](#) in 2023 and represents Italy in United Nations climate change conferences and other international forums.

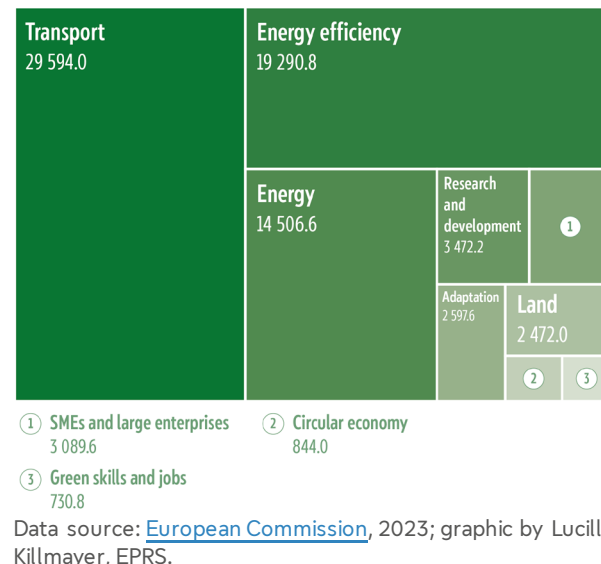
In the framework of the 2015 national [climate change adaptation strategy](#), Italy adopted the national climate change adaptation [plan](#) in December 2023 to provide guidance for planning and implementing effective adaptation actions, and for integrating adaptation into planning procedures. The Italian [Climate Adaptation Platform](#) promotes the exchange of data and information between the central administration, local authorities, citizens and stakeholders. From 2025, Italian companies must have [compulsory insurance](#) against damage from natural disasters and catastrophic events.

Climate action in the national recovery and resilience plan

The Italian [national recovery and resilience plan](#) (NRRP), with a total allocation of €194.4 billion, is the largest national plan under the Next Generation EU instrument, equivalent to 10.8 % of Italy's 2019 gross domestic product. In August 2023, Italy amended the plan with a REPowerEU chapter. The updated plan dedicates 39 % of the allocation to climate action (Figure 2), according to the Commission's [assessment](#), and therefore complies with the Recovery and Resilience Facility target of 37 %.

[Italy's NRRP](#) consists of seven missions, of which three (green revolution and ecological transition, infrastructures for sustainable mobility, and REPowerEU) contribute significantly to climate objectives. Italy will invest 11.7 % of the funds in the rail network, followed by 11.3 % for renewable energy, hydrogen, grid and sustainable mobility, and 5.7 % for REPowerEU measures. The largest measure in the Italian NRRP is the €13.95 billion [Superbonus](#) programme of tax incentives for energy and seismic renovation of residential buildings. In the transport sector, €8.73 billion are dedicated to high-speed railway lines and €4.8 billion to zero-emission regional trains and buses.

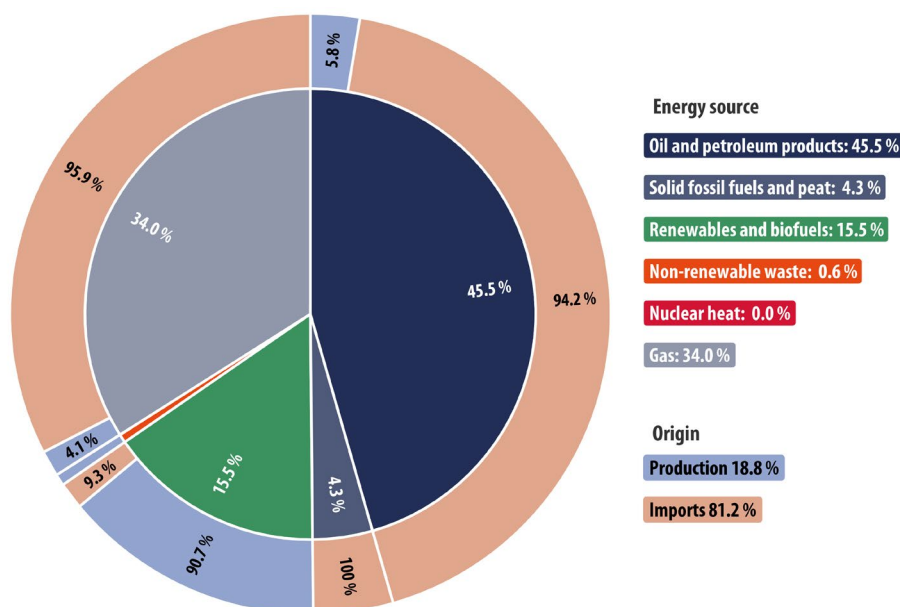
Figure 2 – NRRP climate dimension (€ million)



Energy situation

Italy is heavily dependent on fossil fuel imports (see Figure 3). In 2022, imports accounted for 94.2 % of Italy's oil supply, 95.9 % of its gas supply, and all of its coal supply. Fossil fuels accounted for 84.4 % of Italy's total energy supply in 2022, while renewable energy and biofuels had a 15.5 % share.

Figure 3 – Energy mix and import dependency, 2022



Data source: Eurostat ([nrg_bal_sd](#)), 2024.

Oil and petroleum products have a 45.5 % share in Italy's energy mix. Italy has some domestic crude oil production, but is heavily dependent on imports. Italy has diversified its supply away from Russian oil by increasing volumes from traditional (Algeria, Iran, Libya) and new suppliers (e.g. Azerbaijan, Canada, Qatar, United States). Most of the oil products used in Italy come from domestic refineries.

Natural gas is the second most important energy source in Italy, with a 34 % share. Domestic production accounts for around 4% of the country's gas supply, while the rest is imported. Italy made efforts to diversify away from Russian gas by concluding new agreements for gas supply by pipeline and liquefied natural gas (LNG), making use of existing pipeline, storage and LNG infrastructure. In 2022, Italy halved its gas imports from Russia. The country has taken further steps to strengthen its security of gas supply by increasing domestic production, adding two floating LNG terminals and increasing the capacity of existing ones.

Coal, all of which is imported, accounted for 4% of Italy's energy supply in 2022. In 2021, more than half of Italy's coal imports came from Russia. Italy plans to [phase out coal](#) in electricity generation by 2025. Italy's electricity grid has 30 interconnections with neighbouring countries. Italy is a net importer of electricity, driven by higher electricity prices in Italy.

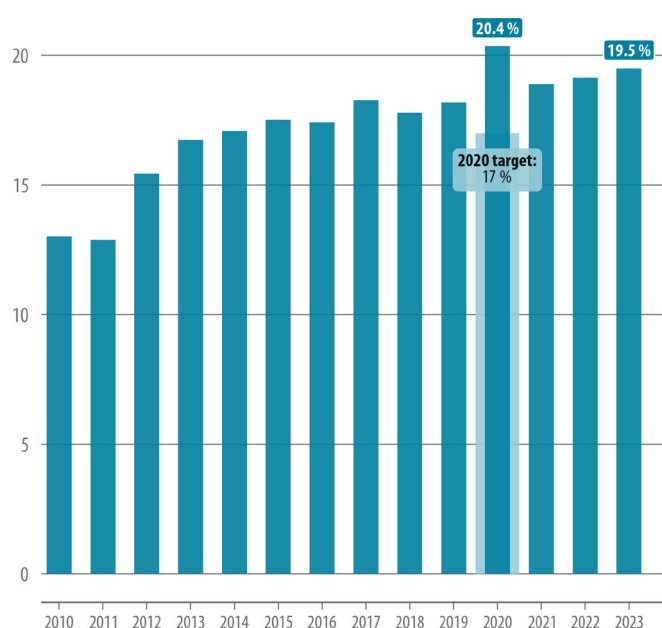
Italy phased out nuclear power following a [1987 referendum](#) in the aftermath of the Chernobyl nuclear accident. Plans to build new nuclear power plants were cancelled following another referendum in 2011. The country has retained nuclear research capacities and is now [considering](#) to add nuclear to its future energy supply after 2035. The ministry for environment and energy security set up a [National Platform](#) for Sustainable Nuclear Power to coordinate organisations dealing with nuclear energy, safety, radiation protection and radioactive waste management.

The November 2024 [national hydrogen strategy](#) presents three scenarios outlining the potential role of hydrogen in the national decarbonisation pathway. Italy intends to build a hydrogen backbone – a trans-European Project of Common Interest – that connects to Austria and Germany, and could be extended to allow for the import of renewable hydrogen from Algeria and Tunisia.

Renewable energy sources (RES) accounted for 19.5 % of final energy consumption in 2023. Thanks to rapid expansion of renewable energy capacity between 2010 and 2013, Italy reached its 2020 target, set out in the Renewable Energy Directive, 6 years early in 2014 (see Figure 4).

Italy aims to reach a 39.4 % RES share in final energy consumption by 2030, in line with its indicative contribution of 38.7 % under the Renewable Energy Directive. Almost two thirds of Italy's electricity production should come from RES by 2030, driven by expansion of solar and onshore wind capacity. Innovative technologies like floating solar and floating offshore wind are expected to play a growing role. Italy promotes [renewable-energy communities](#) and self-consumption.

Figure 4 – Renewable energy share in final energy consumption



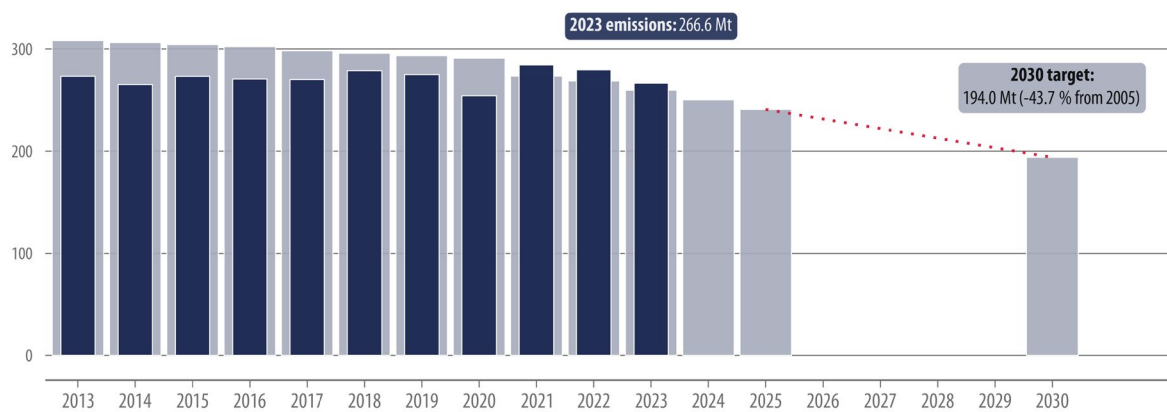
Data source: Eurostat ([nrg_ind_ren](#)), 2024.

Sectoral challenges and strategies

As shown in Figure 5, Italy remained below allocations in each year covered under the Effort-sharing Decision (2013–2020) and delivered a 25.4 % emissions reduction in 2020 compared with 2005, over-achieving the country's 13 % target. The 'fit for 55' revision of the Effort-sharing Regulation (ESR) sets the Italian emissions reduction obligation for 2030 to 43.7 % compared with 2005. Italy's updated NECP projects that the country will reach a 40.6 % reduction, based on measures envisaged in June 2024. Sectors covered by the ESR include transport, buildings, agriculture, small industrial installations, waste treatment, and fugitive emissions from energy supply and product use.

Industry was responsible for 18.8 % of emissions in 2023, and reduced its emissions by 46.8 % since 2005. The NECP's approach to industrial decarbonisation rests on further electrification, renewable and low-carbon hydrogen, and carbon capture utilisation and storage.

Figure 5 – Italy's emissions under the Effort-sharing Decision/Regulation



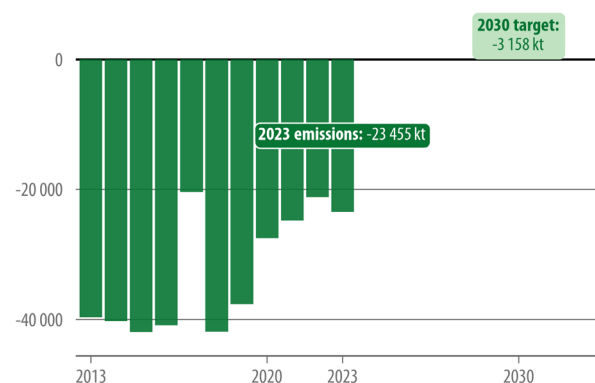
Data source: [EEA](#), 2024.

In 2022, heating and cooling was responsible for 44 % of Italy's final energy consumption. Measures to reduce GHG emissions of the building stock include tax deductions for energy efficiency measures; obligations regarding renewable thermal energy and integration of RES into buildings, and support for municipal energy efficiency investments and for district heating. The [Conto Termico](#) programme supports heat pumps, biomass and solar thermal installations. Improvements in energy efficiency are rewarded with tradable white certificates that electricity and gas distributors can use to meet their annual energy savings obligations. Italy plans to update the [strategy](#) for energy retrofitting of national building stock.

The **transport** sector accounted for 27.4 % of Italian emissions in 2023, and reduced its emissions by 15.7% since 2005. Italy has reduced the sector's emissions through blending obligations for biofuels. Italy pursues a technology-neutral approach for the transport sector, which promotes e-mobility, but also biofuels and renewable fuels of non-biological origin. The country expects to reach 6.6 million electrified cars by 2030.

The **agriculture** sector is responsible for 7.8 % of Italy's GHG emissions and has reduced its emissions by 12.2 % since 2005. Carbon sequestration practices in agroforestry are promoted through carbon credits, which can be

Figure 6 – LULUCF emissions in Italy



Data source: [EEA](#) (2030 target is based on 2016–2018 baseline), 2024.

used on the voluntary carbon market. Italy's agriculture is severely affected by climate change, with [sharp drops](#) in the production of wine, fruit, and olive oil in 2023.

By 2030, Italy [must](#) reduce its LULUCF emissions (Figure 6 above) by 3 158 kilotonnes of CO₂e (ktCO₂e) compared with its average emissions in 2016, 2017 and 2018 (where accounting adjustments may occur). In 2020, this baseline was -32 599 ktCO₂e. The final updated NECP [indicates](#) that Italy is very unlikely to deliver on its national 2030 LULUCF obligation. The national forest strategy aims for extensive and resilient, biodiverse forests that contribute to climate mitigation and adaptation while providing ecological, social and economic benefits for rural and mountainous communities.

Latest policy developments

The Italian government launched a plan in January 2024 to strengthen engagement with Africa, focusing on energy cooperation, economic development, migration and geopolitical competition. The [Mattei plan](#), named after the former chief executive officer of Italian energy company ENI, aims at energy partnerships with African countries, giving Italy access to oil, natural gas and renewable energy sources. Acting as a bridge between Africa and Europe, Italy aspires to become a Mediterranean 'hub' for energy production and transit. As regards climate, the plan promotes energy efficiency, RES, and seeks to accelerate the transition of electricity generation and infrastructure.

In February 2024, the Tribunal of Rome [dismissed](#) Italy's first climate litigation case on the grounds that ordinary courts do not have the power to order the legislature to adopt legislation.

In May 2024, the government launched the [National Energy Income Fund](#), which supports the installation of 31 000 small photovoltaic systems to benefit lower-income families. In August 2024, the Italian Council of Ministers [approved](#) legislation to simplify and accelerate the approval procedures for renewable energy and energy storage projects. A [decree](#) of June 2024 sets annual targets for RES capacity in each Italian region, reaching a total of 80 gigawatts in 2030. Conversely, a [decree-law](#) adopted in May 2024 severely limits the installation of solar power plants on agricultural land. The [FER2 decree](#), in force since August 2024, provides incentives for the roll-out of RES technologies that are not fully mature or have high operating costs, including off-shore wind, geothermal, solar thermal, biomass and biogas, floating photovoltaic, and marine energy systems.

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