



Assessment of Enel's transition plan

About Enel

Headquartered in Rome, it is the largest fossil gas utility in Italy, a country that accounts for a quarter of Europe's gas power capacity. Enel has committed to achieving net-zero by 2040 but at the same time its European portfolio contains 6.9 GW of gas and 4.6 GW of coal capacity, with an additional 3.8 GW in new gas power capacity in the pipeline. Enel was also the fourth largest emitter in Europe 2022, responsible for 29 Mt CO₂e.

Enel is among the three largest integrated utilities in Europe, alongside ENGIE and Iberdrola. It ranks among the largest utilities in the world by capitalization and is active in approximately 30 countries. The Italian government retains significant influence over the company, holding a 23.6% stake through a "golden share" which, under EU rules, allows it to appoint Enel's Chief executive officer (CEO), its President, and two-thirds of its board.

In 2023, Enel experienced a significant change in its leadership. After nine years, CEO Francesco Starace – responsible for transforming the company and putting it on a decarbonization pathway – stepped down. He was replaced by Flavio Cattaneo, who has less experience in the energy sector. Notably, the former CEO of Eni, Paolo Scaroni, a strong proponent of gas and nuclear development, was appointed as President and Chair of the Board of Enel.

Enel's transition plan in a nutshell

Our assessment of ENEL's climate plan reveals a strong willingness to develop sustainable energies (solar and wind) by 2030 as well as battery storage capacities. However, this progress could be undermined if the company pursues its planned coal-to-gas replacement projects and the construction of an onshore LNG plant in Sicily. The absence of a consistent plant-by-plant phaseout strategy for gas casts a shadow over Enel's commitment to be fossil-free by 2040 and align with the International Energy Agency's (IEA) 'Net Zero Emission by 2050' (NZE) pathway limiting global warming to 1.5°C, including decarbonizing electricity by 2035 in Europe and 2040 in the rest of the world. Furthermore, Enel has not ruled out new investments in hydropower and nuclear power. In particular, Enel has recently decided to invest in nuclear research. It is also planning substantial refurbishment and repowering of hydropower plants.

In November 2023, the company's new management presented a corporate strategy for 2024-2027 which dials down the company's ambitions to scale-up renewables. Instead, the leadership opted for a more conservative investment path in order to reduce the company's debt. Enel claims that this will not impact the achievement of its climate targets and plans to invest in "economically secure" renewable energy solutions projects, regulated business, and grids and storage – the

latter being investments required to develop a sustainable-based power system. Enel is also offloading assets as part of a cost-cutting strategy that triggered a strike from its workers in early 2024. Enel is a significant issuer of green and sustainability-linked bonds. However, having ramped up coal production during the recent energy crisis at the behest of the Italian government, Enel failed to meet one of its bond's carbon intensity targets for 2023.

Quality of Enel's transition plan

1. Emission reduction plan

Enel has a direct and indirect emission reduction strategy across the entire value chain validated by the Science-Based Target initiative (SBTi) and in line with a 1.5°C pathway, delivering net zero emissions by 2040. Enel's corporate strategy aims for an 80% greenhouse gas emission reduction in 2030 versus 2017. Enel has both absolute and intensity reduction targets covering scope 1, 2 and 3 emissions across the whole group worldwide, which is an essential component of an ambitious emission reduction plan. Enel has no explicit stand-alone reduction target for methane emissions, but they are included in scope 1 counting. Enel also lacks an explicit fossil gas phase-out objective for 2035 for Europe / the OECD. Enel is committed to zero emissions by 2040 with the ambition of going beyond net zero targets. The company has so far not engaged in carbon removal practices, nor CCUS, but considers these potential future options (up to 2.5 Mt CO₂e/year) if it cannot fully mitigate its emissions as it nears 2040.

2. Energy planning

No clear roadmap for a fossil gas phase-out, while leaving the door open to dubious technologies

Enel has committed to phase-out coal by 2027 and has a plant-by-plant closure roadmap. However, it lacks a similar plan for fossil gas, despite its commitment to exit all fossil fuels by 2040 and requests from civil society and some shareholders to publish one. Enel has also not ruled out coal-to-gas replacements, or the use of technologies such as hydrogen¹ and biomass. The company also lacks any commitment against new hydropower (in Europe), biomass and nuclear. Indeed, Enel has recently decided to invest in nuclear research with Ansaldo Energia and is planning refurbishments and repowering of 20 hydropower plants totaling 4.5 GW capacity.

Despite stating that the Porto Empedocle onshore LNG plant is not part of the company's 2024 strategy, Enel has not ruled out proceeding with the project, which has already been authorized by Italy's Environment Ministry and which the Italian government recently defined as a strategic asset for Italy's energy security. This designation could potentially include it in the regulated energy market at the concession of a publicly guaranteed return on the investment.

Sustainable development plan

Enel has significantly grown its renewables capacity from 45 GW in 2020 to 59 GW in 2023. This includes 34 GW overall: 15.9 GW consolidated wind capacity, 10.4 GW consolidated solar

¹ To date, Enel only has pilot projects in green hydrogen

capacity, 6.2 GW of managed capacity and 1.6 GW Battery Energy Storage Systems (BESS). All will continue to be a primary focus of future investments as well as grids. Enel plans to add 13 GW of wind, solar and BESS over the next three years.

Enel has a target of 73 GW of Renewable Energy Sources (RES) or low-carbon capacity (78% of a total 93 GW, including 29 GW of existing hydropower, 1 GW of existing geothermal and 3 GW of existing nuclear) by 2026 and 86% GHG-free production by the same year. This target implies that, by the end of 2026, Enel's capacity will come close to 40 GW made up of wind, solar and BESS, including ownership, partnership and stewardship. Enel is also targeting 85% RES capacity by 2030 and 90% GHG-free production by the same year. However, the planned total installed capacity for 2030 remains unclear due to the retirement of some hydropower and fossil-fired plants making it uncertain what the total amount of wind, solar and BESS in Enel's fleet will be in 2030.

3. Capex allocation

Enel's overall gross CAPEX for the period 2024-2026 amounts to €35.8 billion. Approximately 5% (€1.8 billion) of this CAPEX is still allocated to fossil fuel capacity, which includes coal-to-gas replacement projects and one regasification plant. This level of investment is out of sync with the Net Zero Emissions by 2050 (NZE) scenario from the International Energy Agency (IEA),² which requires almost no investment in fossil fuels by 2030.

The distribution of the CAPEX is as follows:

- 30%, or €10.7 billion, is invested in renewables (including €4.5 billion in solar, €3.9 billion in onshore wind, €0.7 billion in hydropower, and €1.6 billion in geothermal maintenance CAPEX), of which 60% is within Europe. This represents a 5% reduction compared to the 2021-2023 period.
- 53%, or €19 billion, is directed towards grids, with 80% of this investment in Europe, marking a 4% increase from the previous period.
- 4%, or €1.4 billion, is allocated to BESS.
- 8% is spent on customer-oriented initiatives, including digitalization and energy services.
- 5% or €1.8 billion to fossil fuel capacities.

The high investments planned by Enel in grids' development - a key element to support a renewable-based power system - is noticeable. However, considering the decrease in investments planned over the next couple of years compared to the 2021-2023 period, Enel should strengthen its commitment to investing in renewable energies – specifically in wind and solar.

4. Climate planning: strategy and governance

Enel annually reports on the incremental progress made towards its targets, detailing the main drivers and actions that contribute to its progress by quantifying the impact of each action and factor. While ENEL does report on some plant closures, the absence of specific plant-by-plant closure dates for its gas fleet complicates the monitoring of its progress. As previously noted, Enel

² International Energy Agency (IEA), [Net Zero by 2050 Scenario](#), May 2021

failed its carbon intensity target for 2023, which negatively impacted on its commitments under one of its sustainability-linked bonds. Enel's CEO has responsibility for climate-related issues and reports directly to the board, with incentives structured to boost the achievement of climate transition plan KPIs. However, accountability mechanisms are limited to potential financial losses if KPIs are not met.

5. Transparency

Enel provided quality answers for most questions although they failed to do so for all of them.