

ZERO EMISSIONS AMBITION AND JUST TRANSITION



Enel is committed to achieving zero emissions by 2040, and developing a business model in line with the goals of the Paris Agreement. The Group has therefore established a decarbonization roadmap for both direct and indirect emissions throughout the value chain.

Below the 2023 results related to the previous 2023–2025 Sustainability Plan, the resulting progress and targets of the 2024–2026 Sustainability Plan, which may be redefined, added, or outdated with respect to the previous Plan.

ACTIVITIES	2023 RESULTS	2024–2026 TARGETS	MAIN SDGs
ALIGNMENT TO THE 1.5 °C PATHWAY - ENEL'S ROADMAP FOR DECARBONIZATION TO 2040			
Reduction in Scope 1 GHG emissions Intensity relating to Power Generation ⁽¹⁾⁽²⁾⁽³⁾	160 gCO_{2eq}/kWh (-56.2% vs 2017) ⁽⁴⁾ <i>The 2023 target of 148 gCO_{2eq}/kWh was not achieved⁽⁵⁾.</i>	125 gCO_{2eq}/kWh in 2026 (-66% vs 2017) 72 gCO_{2eq}/kWh in 2030 (-80% vs 2017)	13
Reduction in Scope 1 and 3 GHG emissions Intensity relating to Integrated Power ⁽¹⁾⁽²⁾⁽⁶⁾	168 gCO_{2eq}/kWh (-49.3% vs 2017) ⁽⁴⁾	135 gCO_{2eq}/kWh in 2026 (-59% vs 2017) 73 gCO_{2eq}/kWh in 2030 (-78% vs 2017)	13
Reduction in Absolute Scope 3 GHG emissions relating to Gas Retail ⁽¹⁾⁽²⁾	16.8 MtCO_{2eq} (-33.5% vs 2017) ⁽⁴⁾	20.0 MtCO_{2eq} in 2026 (-21% vs 2017) 11.4 MtCO_{2eq} in 2030 (-55% vs 2017)	13
Reduction in additional absolute GHG emissions (Scope 1+2+3) ⁽¹⁾⁽⁷⁾ Target scope 2017-2030	11.9 MtCO_{2eq} (-48.6% vs 2017)	10.4 MtCO_{2eq} in 2030 (-55% vs 2017)	13
MBA-PhD training about resilience and energy transition in the countries where the Group operates	204 people involved	<i>Activity under review</i>	13 17

(1) 2017 baseline in line with the 2023–2025 and 2024–2026 long-term SBTi certification issued in 2022. Refer to the 2022 Sustainability Report for further details.
 (2) Target included in Sustainability-Linked financial instruments.
 (3) Target included in the remuneration plan as a gate.
 (4) Indicator subjected to reasonable assurance.
 (5) Due to the energy crisis, the intensity was slightly above the target of 148 gCO_{2eq}/kWh. In absence of this effect, Enel would have been able to achieve an intensity emission level well below the target. Enel has reconfirmed its commitment to decarbonization in both the short- and medium-to-long term, as set out in the new 2024–2026 Strategic Plan.
 (6) Target included in the 2023–2025 and 2024–2026 long-term remuneration plan.
 (7) Figure relating to the 2017–2030 roadmap. Refer to the paragraph “Enel’s roadmap to decarbonization” for more details.

Goals



New



Redefined



Outdated

Progress



Not in line



In line



Achieved

N.A. = not applicable, target not included in the 2023–2025 Sustainability Plan

ZERO EMISSIONS AMBITION AND JUST TRANSITION



94.3 MtCO_{2eq}

**TOTAL GROUP
CARBON FOOTPRINT
(SCOPE 1, 2 AND 3)**

127.9 in 2022  **-26.3%**

160 gCO_{2eq}/kWh

**SCOPE 1 GHG EMISSIONS
INTENSITY RELATING TO POWER
GENERATION**

229 in 2022  **-30.1%**

168 gCO_{2eq}/kWh

**SCOPE 1 AND 3 GHG EMISSIONS
INTENSITY RELATING TO
INTEGRATED POWER**

210 in 2022  **-20.0%**

16.8 MtCO_{2eq}

**ABSOLUTE SCOPE 3 GHG
EMISSIONS RELATING
TO GAS RETAIL**

20.6 in 2022  **-18.6%**

68.2%

**RENEWABLE NET
CAPACITY OUT
OF THE TOTAL**

63.3% in 2022  **+7.7%**

Enel is committed to developing a **business model in line with the Paris Agreement (COP 21) goals** in order to limit the average global temperature increase to below 1.5 °C and to achieve zero emissions by 2040, even ahead of globally established commitments, promoting the key role of electricity as an energy carrier to drive the transition to a Net Zero global economy by 2050.

In order to achieve zero emissions by 2040, Enel has defined a decarbonization roadmap that covers **both direct and indirect emissions along the Group's entire value chain** and consists of four targets certified by the Science Based Targets initiative (SBTi), in line with limiting global warming to below 1.5 °C.

Through its **business strategy**, the Group is committed to establishing the drivers and investments necessary to develop climate change mitigation and adaptation actions throughout its value chain. Specifically, with regard to **generation**, the Group is committed to promoting the development of electricity generation from renewable sources and completing the gradual phase-out of fossil fuels. With regard to **electricity distribution**, Enel is committed to digitalizing and improving the network to increase its resilience to climate phenomena. The Group plans to strengthen the role of distribution networks, which in the future will

have to offer greater reliability due to the increased use of electricity and of green technologies, and will also leverage the power of digitalization so that it can offer inclusive and participatory platforms for all customers. The challenge will be to facilitate access to enabling technologies for electrification as well as new services with high digital content.



Enel aims at driving its customers towards a decarbonized electrification of use. First, by increasing the weight of electricity use from renewable sources, Enel customers will reduce their indirect emissions (Scope 2 customer emissions), and second, by developing a portfolio of products and services to accelerate the electrification of other sectors, such as transportation and construction, while fostering energy efficiency solutions, customers will also reduce their direct emissions (Scope 1 customer emissions).

There is a particular focus on **climate change adaptation strategy** in order to increase the resilience of the assets along the entire value chain, thereby limiting potentially negative impacts and guaranteeing a safe and sustainable energy service in all the countries in which the Group operates. Adaptation solutions implemented by the Group may concern actions in the short-term, as well as long-term decision making such as the planning of investments in response to climate phenomena.

Rising temperatures, changes in precipitation patterns and extreme weather events also have a significant impact on the natural environment, by affecting the ecosystems resilience to climate change impacts and the ability to capture carbon and generate benefits for society. Therefore, Enel's business model takes a synergic approach to tackling climate change and **promoting the protection and conservation of nature**, which are essential factors in its corporate strategy and everyday operations.

Aware of the social impact that its decarbonization strategy has, the Group has committed to a just energy transition, managing the environmental and social components in an integrated way to ensure that no one is left behind in the transition in a climate neutral economy. In fact, a well-managed transition may help addressing the socio-economic impacts of a changing climate while fostering growth, generating net new jobs, and reducing inequality, thereby making a real contribution to achieving the UN 2030 Agenda.

Enel's strong presence in the territory and its business enable a just transition roadmap based on ongoing dialogue with all the affected stakeholders, including Enel people, suppliers, financial and commercial partners, communities in the area of influence of operations, and customers, in order to raise their awareness and to provide a valuable contribution from an ecosystemic standpoint.

To this end, **Enel** in 2019 **signed the United Nations Pledge letter on business commitment to a just transition and green and decent jobs**, committing to:

- promoting multi-stakeholder engagement and social dialogue with institutions, workers' and their representatives, respecting workers' rights, encouraging social protection (including pensions and health care), and

providing wage guarantees, in line with the core and occupational health and safety standards of the International Labor Organization (ILO);

- working with existing and new suppliers that respect these standards, supporting them to increase their resilience in a transitioning economy, while advocating and acting for diversification of the supply chain of technologies critical to net zero achievement;
- contributing to the social and economic development of local communities, particularly so in the case of those most exposed to the transition out from fossil fuels and into green technologies;
- supporting customers in their electrification journey while at the same time allowing for an affordable, secure and green access to energy.

Furthermore, the Group confirmed its **commitment in line with the Paris Agreement**, during the United Nations Framework Convention on Climate Change – COP 27. The Group signed, jointly with other 270 corporates and civil society leaders, a declaration reciting **“We stand ready to deliver a just transition and an equitable and inclusive future for all. We want to work with governments in building an enduring legacy based on our collective efforts to secure 1.5 °C”**.

Therefore, the Group has defined concrete actions and plans also at country level, and consistently with the Group's strategy. Such plans are based on the objectives of the Paris Agreement, the principles of the ILO's Just Transition Guidelines and the United Nations Pledge letter, as well as on the public commitment set out in the Group Human Rights Policy.

Enel is committed to carrying out its direct and indirect public advocacy actions in line with the Paris Agreement and with the target of limiting global warming to within 1.5 °C. The Group pursues such goal by engaging with institutional stakeholders, trade associations, non-governmental organizations and the academic world, promoting the Group's perspective on public policies concerning climate change and leading the decarbonization and electrification process along a just transition pathway.

In addition, as a result of a solid corporate governance system that defines roles and responsibilities, **Enel's Board of Directors and Management oversee the main climate-related decisions.**

In order to ensure increasing **transparency in its communications** and relations with its stakeholders, Enel is publicly committed to periodically reporting on its climate change activities and achievements in line with the most widely recognized **international reporting standards** of its stakeholders and consistent with the approach introduced by the recommendations of the Financial Stability Board's Task Force on Climate-related

Financial Disclosures (TCFD)⁽¹⁾. It pays particular attention to the new **Corporate Sustainability Reporting Directive (CSRD)** and the **European Sustainability Reporting Standards (ESRS)**, which are an essential part of the Directive and which include specific criteria on climate change reporting procedures. In addition to Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB)

standards, Enel's reporting process also incorporates other voluntary standards, such as IFRS S2 "Climate-related Disclosures", the first thematic standard of the ISSB which requires companies to disclose information regarding their exposure to climate-related risks and opportunities. The Group also takes into account the reporting requirements of key **ESG ratings** and institutional investors.

Enel's roadmap to decarbonization

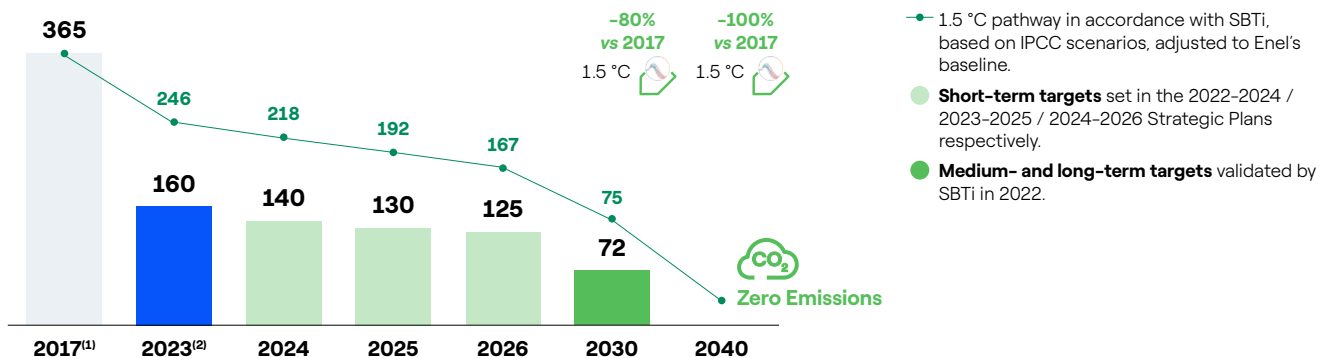
TCFD: Metrics & Targets

Enel's decarbonization roadmap is built on four targets validated by the Science Based Targets initiative in 2022 according to the criteria and recommendations for near-term targets and to the SBTi Corporate Net Zero standard. All targets are aligned to a 1.5 °C pathway, as defined by the SBTi, according to IPCC scenarios and other international benchmarks. They also cover the Group various business activities, namely the generation and distribution of electricity and the sale of electricity, gas and services to end customers, and the various sources of direct and indirect emissions along the entire value chain (upstream and downstream).

The four targets are the following:

- **Scope 1 GHG emissions Intensity relating to Power Generation.** This target covers all greenhouse gas emissions (including CO₂, CH₄ and N₂O) deriving from the power generation process compared to the total electricity generated by the Group (excluding the generation of electricity from pure pumped storage hydro-power to avoid possible double counting in the Scope 2 emissions target). The targets for 2030 and 2040 were defined according to SBTi's "sectoral decarbonization approach" (SDA) model, and predict a reduction, compared to 2017, of 80% and 100%, respectively.

SCOPE 1 GHG EMISSIONS INTENSITY RELATING TO POWER GENERATION (gCO_{2eq}/kWh)



(1) Baseline 2017 in line with SBTi certification issued in 2022. For further details see the Sustainability Report 2022 (https://www.enel.com/content/dam/enel-com/documenti/investitori/sostenibilita/2022/sustainability-report_2022.pdf).

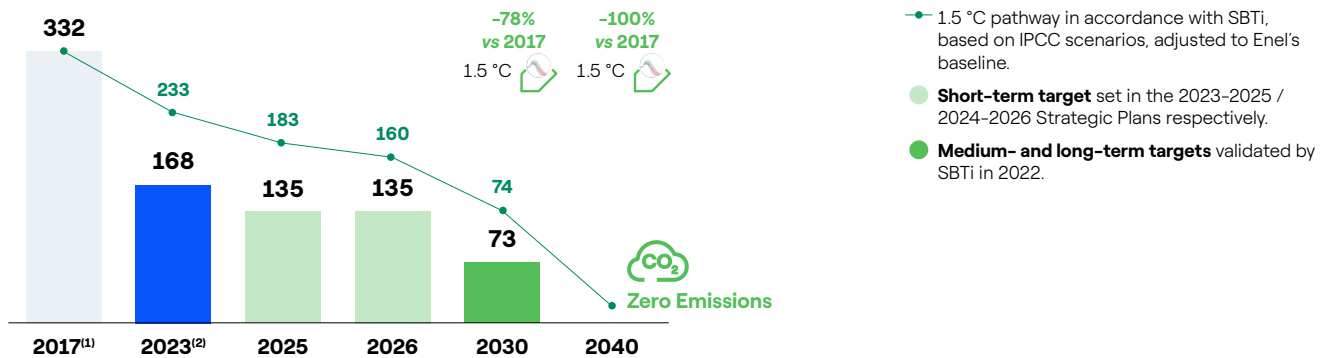
(2) Actual figure. For further details, please refer to the paragraph "Enel's performance in tackling climate change" in this chapter.

(1) For details on the alignment of the structure of the chapter with the TCFD recommendations, please see the TCFD Content Index of the Sustainability Report 2023.

- **Scope 1 and 3 GHG emissions Intensity relating to Integrated Power.** This target is calculated by combining the Group's direct GHG emissions (Scope 1, including CO₂, CH₄ and N₂O) from power generation and the Group's indirect GHG emissions (Scope 3) from the generation of electricity purchased and sold to end customers (which is an element of subcategory 3

- Fuel and Energy Related Activities of the GHG protocol - Scope 3 standard), divided by electricity generation and purchases (excluding pure pumped storage hydropower). The targets for 2030 and 2040 were defined according to SBTi's "sectoral decarbonization approach" (SDA) model and predict a reduction, compared to 2017, of 78% and 100%, respectively.

SCOPE 1 AND 3 GHG EMISSIONS INTENSITY RELATING TO INTEGRATED POWER (gCO_{2eq}/kWh)

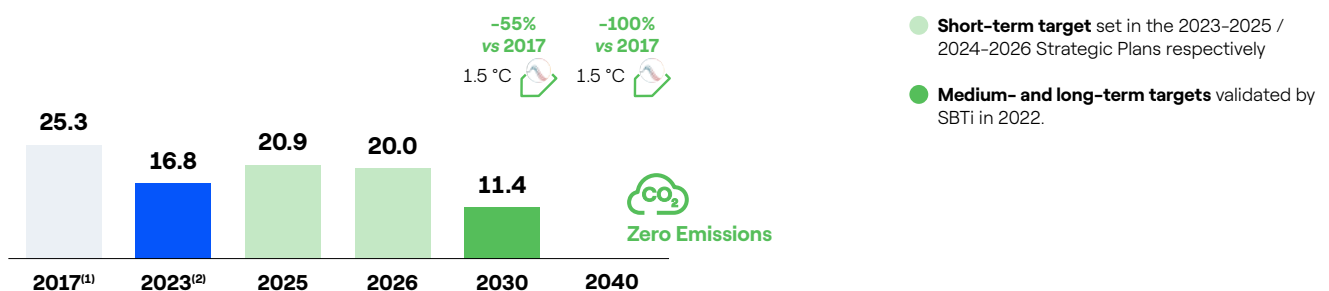


- (1) Baseline 2017 in line with SBTi certification issued in 2022. For further details see the Sustainability Report 2022 (https://www.enel.com/content/dam/enel-com/documenti/investitori/sostenibilita/2022/sustainability-report_2022.pdf).
- (2) Actual figure. For further details, please refer to the paragraph "Enel's performance in tackling climate change" in this chapter.

- **Absolute Scope 3 GHG emissions relating to Gas Retail in the end-user market.** The targets for 2030 and 2040 were defined according to SBTi's "absolute contraction

approach" and predict a reduction, compared to 2017, of 55% and 100%, respectively.

ABSOLUTE SCOPE 3 GHG EMISSIONS RELATING TO GAS RETAIL (MtCO_{2eq})



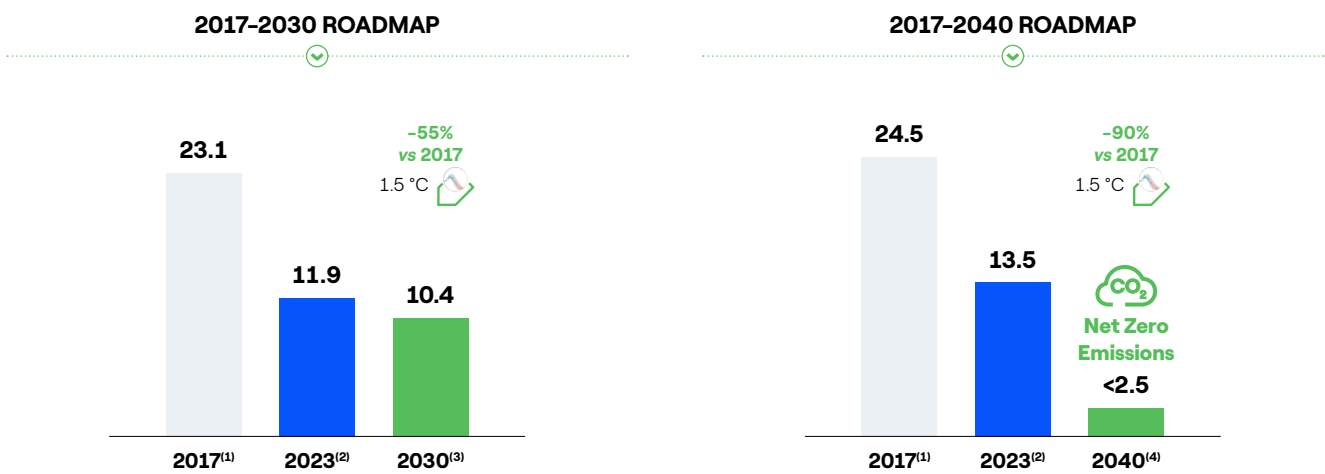
- (1) Baseline 2017 in line with SBTi certification issued in 2022. For further details see the Sustainability Report 2022 (https://www.enel.com/content/dam/enel-com/documenti/investitori/sostenibilita/2022/sustainability-report_2022.pdf).
- (2) Actual figure. For further details, please refer to the paragraph "Enel's performance in tackling climate change" in this chapter.

- **Additional absolute Scope 1, 2 and 3 emissions.** The target covers (i) Scope 1 GHG emissions from vehicle fleet and buildings, and losses of SF₆ in distribution assets; (ii) all Scope 2 emissions; (iii) Scope 3 emissions from the supply chain and all other activities related to the purchase and transportation of fuels. The targets for 2030 and 2040 have been defined according to SBTi's "absolute contraction approach" model, and include a reduction, compared to 2017, of 55% and 90%, respectively. After 2040, a residual volume could remain of less than 2.5 MtCO_{2eq} to be neutralized through carbon removal.

Furthermore, provision is made for various levels of coverage of supply chain GHG emissions for the 2030 and 2040 targets permitted by the SBTi, resulting in two decarbonization curves:

- the 2017-2030 roadmap covers specific supply chain categories that accounted for 40% of supplier emissions in 2017;
- the 2017-2040 roadmap covers all supply categories included in the 2017-2030 roadmap and additional ones, which account for 54% of supplier emissions in 2017.

ADDITIONAL SCOPE 1-2-3 EMISSIONS (MtCO_{2eq})



- **Medium- and long-term targets** validated by SBTi in 2022.

- (1) Baseline 2017 in line with SBTi certification issued in 2022. For further details see the Sustainability Report 2022 (https://www.enel.com/content/dam/enel-com/documenti/investitori/sostenibilita/2022/sustainability-report_2022.pdf).
- (2) Actual figure. For further details, please refer to the paragraph "Enel's performance in tackling climate change" in this chapter.
- (3) The 2017-2030 roadmap covers specific supply chain categories that accounted for 40% of supplier emissions in 2017.
- (4) The 2017-2040 roadmap covers all supply chain categories included in the 2017-2030 roadmap and additional ones, which accounted for 54% of supplier emissions in 2017.

The four targets cover 92.2%⁽²⁾ of Enel's total reported direct and indirect GHG emissions in 2023, including 95.5% of Scope 1, 100% of Scope 2, and 90%² of Scope 3, as

shown in the tables below, in line with the SBTi requirements.

(2) This value takes into account the 2040 targets. In contrast, for the 2030 targets, the coverage level for all direct and indirect emissions is 90.5% and the coverage level for indirect Scope 3 emissions is 87%, both in line with SBTi requirements and calculated using the location-based model.







ZERO EMISSIONS AMBITION

Enel is committed to achieving zero emissions by 2040 and to developing a business model that is in line with the objectives of the Paris Agreement (COP 21) to limit the average increase in global temperatures to below

1.5 °C. For this reason, the Group has developed a decarbonization roadmap that covers both direct and indirect emissions throughout the value chain. The roadmap includes four targets certified by the Science Based Targets initiative (SBTi) in December 2022 to be in line with the Net Zero Standard.

GHG TARGET







Scope 1 GHG emissions Intensity relating to Power Generation







Primary business activity	Electricity generation		
Type of activity in value chain	Direct		
Stakeholders impacted or involved	<ul style="list-style-type: none"> • Customers and power consumers • Society and environment 		
Sources of covered GHG (GHG Protocol)⁽¹⁾	95% of Scope 1 GHG emissions ⁽²⁾		
Time frame	 Short term (2026)	 Medium term (2030)	 Long term (2040)
GHG target	125 gCO _{2eq} /kWh	72 gCO _{2eq} /kWh	0 gCO _{2eq} /kWh Zero emissions
% reduction on 2017 (SBTi baseline)	-66%	-80%	-100%
% reduction on 2023 (reporting year)	-22%	-55%	-100%
Climate scenario	 1.5 °C ⁽³⁾	 1.5 °C (SBTi certified)	 1.5 °C (SBTi certified)
Primary drivers and actions	<ul style="list-style-type: none"> • Gradual phase-out of coal-fired capacity in 2024-2026, with planned closure of the Federico II and Torvaldaliga Nord plants in Italy (with a total capacity of about 3.6 GW). • Investment of €12.1 billion to accelerate the development of renewable energy by installing 13.4 GW of new renewables capacity (about 11.3 GW of which at the consolidated level) in 2024-2026, reaching 73 GW of renewables capacity (including BESS) by 2026. • Continue the process of decarbonizing electricity generation, with the share of renewables plants capacity in the Enel asset portfolio reaching 78% in 2026, with zero-emissions generation amounting to 86% of the total, including consolidated and managed generation. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • Continue the process of decarbonizing electricity generation, with Group investments raising the share of renewables plants capacity in the asset portfolio to about 85% in 2030, with zero-emissions generation amounting to 90% of the total, including consolidated and managed generation. • Exit from coal-fired generation, which is expected to take place by 2027 globally. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • Exit from the thermal electricity generation business, achieving a 100% renewable energy mix. • No use of carbon-removal technologies to achieve the target.





KPI achievement in 2023: 160 gCO_{2eq}/kWh

- About €5.9 billion invested in renewables in 2023.
- New installed consolidated capacity from renewables equal to 4 GW in 2023, bringing total consolidated capacity to 55.5 GW in 2023.
- Increase in consolidated generation from renewables equal to 13% on 2022, representing 61% of total consolidated generation in 2023.
- Reduction of thermal capacity by approximately 5.1 GW compared to 2022, including the closure of two coal-fired plants (for a total of about 2 GW) and the sale of gas plants in Argentina (for a total of about 3 GW) and Colombia (for a total of about 0.2 GW).
- Reduction of thermal generation by 38% compared to 2022 (specifically, with a 45% reduction in coal-fired generation), representing 27% of total generation in 2023.

Results and main actions in 2023

GHG TARGET		Scope 1 and 3 GHG emissions Intensity relating to Integrated Power		
Primary business activity	Sale of electricity			
Type of activity in value chain	<ul style="list-style-type: none"> • Direct (electricity generation) • Upstream value chain (purchase of electricity from other generators for sale to end users) 			
Stakeholders impacted or involved	<ul style="list-style-type: none"> • Customers and power consumers • Electricity generators (peers) • Society and environment 			
Sources of covered GHG (GHG Protocol) ⁽¹⁾	<ul style="list-style-type: none"> • 95% of Scope 1 GHG emissions • 42% of Scope 3 GHG emissions (representing 78% of Scope 3 GHG emissions – category 3) 			
Time frame	 Short term (2026)	 Medium term (2030)	 Long term (2040)	
GHG target	135 gCO _{2eq} /kWh	73 gCO _{2eq} /kWh	0 gCO _{2eq} /kWh Zero emissions	
% reduction on 2017 (SBTi baseline)	-59%	-78%	-100%	
% reduction on 2023 (reporting year)	-20%	-57%	-100%	
Climate scenario	 1.5 °C ⁽³⁾	 1.5 °C (SBTi certified)	 1.5 °C (SBTi certified)	
Primary drivers and actions	<ul style="list-style-type: none"> • Increase the share of renewable energy sold to customers, while increasing the Group's renewables production and optimizing customer portfolio, continuing supply and demand balancing strategy. • In Europe, increase the share of fixed-price energy sales to end users covered by zero-emissions sources from about 65% in 2023 to more than 80% in 2026. • In Latin America, maintain 100% zero-emissions sales to end users (including through PPAs). • In North America, maintain 100% zero-emissions sales to end users. • Continue the process of decarbonizing electricity generation, increasing zero-emissions generation from 75% in 2023 (including managed capacity) to 86% of total in 2026, including consolidated and managed capacity. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • Continue the strategy of balancing supply and demand and increase the share of electricity sold at a fixed price covered by carbon-free generation. • Continue the process of decarbonizing electricity generation, increasing zero-emissions generation to about 90% of the total in 2030. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • By 2040, achieve 100% of electricity sales covered by renewables. • No use of carbon-removal technologies to achieve the target. 	
Results and main actions in 2023	<p style="text-align: center;">KPI achievement in 2023: 168 gCO_{2eq}/kWh</p> <ul style="list-style-type: none"> • 13% increase in Group consolidated renewables generation in 2023 compared to 2022. • 7% reduction in the gap between sale of electricity to end users and own generation in the countries in which the Group has an integrated position in 2023 compared to 2022. 			

GHG TARGET		Absolute Scope 3 GHG emissions relating to Gas Retail		
Primary business activity	Sale of gas to end users			
Type of activity in value chain	• Downstream value chain			
Stakeholders impacted or involved	• Gas customers • Society and environment			
Sources of covered GHG (GHG Protocol) ⁽¹⁾	• 30% of Scope 3 GHG emissions (corresponding to 100% of Scope 3 GHG emissions – category 11)			
Time frame	 Short term (2026)	 Medium term (2030)	 Long term (2040)	
GHG target	20.0 MtCO _{2eq}	11.4 MtCO _{2eq}	0 MtCO _{2eq} Zero emissions	
% reduction on 2017 (SBTi baseline)	-21%	-55%	-100%	
% reduction on 2023 (reporting year)	– ⁽⁴⁾	-32%	-100%	
Climate scenario	 n.a. ⁽⁵⁾	 1.5 °C (SBTi certified)	 1.5 °C (SBTi certified)	
Primary drivers and actions	<ul style="list-style-type: none"> • Encourage customers (especially residential customers) to switch from gas to electricity by promoting efficient electricity technologies (e.g., heat pumps for home heating or induction cooktops in kitchens), increasing annual unit electricity consumption of free-market B2C power customers (in Italy and Iberia) from 2.65 MWh in 2023 to about 2.9 MWh in 2026, thereby increasing the electrification rate of customers. • Allocate 32% of investment in grids in 2024–2026 to connections, also to enabling the expansion of distributed generation, thereby promoting the electrification of end users' energy consumption. The number of connections to distributed generation is forecast to double in the period, reaching 4 million in 2026. • Reduce the volumes of gas sold to customers to around 8.4 billion cubic meters in 2026. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • Encourage customers (especially residential customers) to switch from gas to electricity by promoting efficient electricity technologies (e.g., heat pumps for home heating or induction cooktops in kitchens), increasing annual unit electricity consumption of free-market B2C power customers (in Italy and Iberia) to about 3.5 MWh in 2030, thereby increasing the electrification rate of customers. • Continue to invest in distribution networks, supporting the growth of distributed generation, thereby promoting the electrification of end users' energy consumption, reaching 6 million connections to distributed generation in 2030. • Optimize the customer gas portfolio (industrial customers in particular), continuing to reduce the volume of gas sold to about 5.3 billion cubic meters in 2030. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • By 2040, achieve 100% of energy sales covered by renewables. • Exit retail gas sales business by 2040. • No use of carbon-removal technologies to achieve the target. 	
Results and main actions in 2023	<p style="text-align: center;">KPI achievement in 2023: 16.8 MtCO_{2eq}</p> <ul style="list-style-type: none"> • 6.2 million gas customers in 2023, with a reduction of 6% compared to 2022. • 8.3 bcm on Gas sales in 2023, with a reduction of 19% compared to 2022. • 3.6 million new connections in 2023. 			

GHG TARGET	Additional Scope 1, 2 and 3 emissions	
Primary business activity	<ul style="list-style-type: none"> • Electricity distribution (Scopes 1 and 2) • Management of vehicle fleet, buildings and other assets (Scopes 1 and 2) • Supply chain management (Scope 3) • Purchase of fuels (Scope 3) 	
Type of activity in value chain	<ul style="list-style-type: none"> • Direct (electricity distribution and management of vehicle fleet, buildings and other Group assets) • Upstream value chain (supply chain for products and services and fuel business) 	
Stakeholders impacted or involved	<ul style="list-style-type: none"> • End users and electricity consumers • Electric utilities (peers) • Suppliers of goods and services • Oil&gas suppliers • Society and environment 	
Sources of covered GHG (GHG Protocol)⁽¹⁾	<ul style="list-style-type: none"> • 0.5% of Scope 1 GHG emissions • 100% of Scope 2 GHG emissions • Target 2030⁽⁶⁾: 15% of Scope 3 GHG emissions (representing 17% of Scope 3 emissions - category 1 and 22% of Scope 3 emissions - category 3) • Target 2040⁽⁶⁾: 18% of Scope 3 GHG emissions (representing 35% of Scope 3 emissions - category 1 and 22% of Scope 3 emissions - category 3) 	
Time frame	 Medium term (2030)	 Long term (2040)
GHG target	10.4 MtCO_{2eq}	<2.5 MtCO_{2eq} Net zero emissions
% reduction on 2017 (SBTi baseline)	-55%	-90%
% reduction on 2023 (reporting year)	-12%	-83%
Climate scenario	 1.5 °C (SBTi certified)	 1.5 °C (SBTi certified)
Primary drivers and actions	<ul style="list-style-type: none"> • Investment of €18.6 billion in grids over the 2024-2026 period, of which 50% are to improve grid resilience, quality and digitalization, thereby helping to reduce grid losses and related greenhouse gas emissions. Replace existing distribution grid infrastructure components with SF₆-free solutions. • Implement a circular procurement approach; increase the number of contracts that include the measurement of the carbon footprint of the products and services purchased by Enel, encouraging its reduction in a collaborative decarbonization process with suppliers. Strengthen dialogue with raw material producers and other utilities to define shared and effective long-term decarbonization strategies. • Phase-out coal-fired generation by 2027, mitigating all GHG emissions related to coal supply. • No use of carbon-removal technologies to achieve the target. 	<ul style="list-style-type: none"> • Promote grid digitalization and replace existing distribution grid infrastructure components with SF₆-free solutions. • Implement a circular procurement approach; increase the number of contracts that include the measurement of the carbon footprint of the products and services purchased by Enel, encouraging its reduction in a collaborative decarbonization process with suppliers. Strengthen dialogue with raw material producers and other utilities to define shared and effective long-term decarbonization strategies. • Eliminate emissions connected with gas extraction activities, as the Group has fully exited gas-fired generation and sale of gas to end users. • Neutralize the residual amount through carbon-removal actions (purchase of certificates linked to nature-based or technology-based projects in voluntary carbon markets, in accordance with international standards) if complete mitigation of emissions is not feasible due to exogenous factors (technological, market or regulatory).
KPI achievement in 2023: 11.9 MtCO_{2eq} (for 2017-2030 target scope) and 13.5 MtCO_{2eq} (for 2017-2040 target scope)⁽⁶⁾		
Results and main actions in 2023	<ul style="list-style-type: none"> • €5.4 billion invested in the grid in 2023. • 43% reduction in coal consumed in thermoelectric power plants. • 41% reduction in volume of gas consumed in thermoelectric power plants compared with 2022 (due also to the sale of gas plants in Russia and Argentina), and 19% reduction in volume of gas sold to end users compared with 2022. • 8% reduction in electricity consumption in Group power plants and buildings. • 24% reduction in emissions intensity (tCO_{2eq}/€mil) in supply chain in 2023 compared with 2022, reaching 684 tCO_{2eq}/€mil. 	

TOTAL COVERAGE OF SCOPES 1-2-3 EMISSIONS IN 2023

- **95.5%** of Scope 1 GHG emissions (2026, 2030 and 2040 targets)
- **100%** of Scope 2 GHG emissions (2030 and 2040 targets)
- **87%** (2017-2030 target) and **90%** (2017-2040 target) of Scope 3 GHG emissions⁽⁶⁾

- (1) Percentages based on total GHG emissions in 2023.
- (2) Excludes marginal Scope 1 GHG emissions not directly related to the combustion of fossil fuels in electricity generation at thermal plants. These emissions also include the use of auxiliary services in distribution operations. In particular, in 2023 there was an extraordinarily high use of these services in Brazil to deal with the meteorological emergency that occurred in São Paulo in November 2023, which caused the interruption of grid operations. However, 95.8% of Scope 1 and Scope 2 GHG emissions are covered by all of the above targets, greater than the 95% threshold required by SBTi and GHG Protocol.
- (3) The target is in line with the 1.5 °C pathway set by the SBTi for the electrical services industry (Sectoral Decarbonization Approach, or SDA), although it could not be officially validated because the SBTi does not certify targets over a time frame of less than five years from the presentation date.
- (4) In 2023, gas sales decreased considerably compared with previous years. Furthermore, a methodological change in the use of conversion factors has been implemented. These two factors produced a value below the target expected for 2026.
- (5) The target could not be officially validated because the SBTi does not validate targets over a time frame of less than five years from the presentation date. In addition, the SBTi has not defined a sectoral decarbonization approach for these types of emissions, so the ambition level cannot be verified.
- (6) Two different percentage limits have been set for the target for Scope 3 GHG emissions from the supply chain, as allowed by SBTi, which required coverage of at least 67% of Scope 3 emissions for the 2030 target, and at least 90% for the 2040 target.



Enel's roadmap for a just transition

Enel's roadmap for a just transition hinges on three pillars:

- **engagement with internal and external stakeholders** in order to increase their awareness and develop a constructive dialogue that can provide a valuable contribution to the transition itself;
- **transition out** of high-carbon activities, with the development of activities to support the vocational requalification, retraining, and self-learning of direct and indirect workers, to support business diversification and greater resilience of the supply chain, to foster the so-

cio-economic development of communities in the area of influence of its operations and to help customers to quit conventional technologies;

- **transition into** green technologies, facilitating access to new job opportunities for direct and indirect workers, and developing inclusive and accessible solutions for communities and customers through user-friendly services and offerings that reduce complexity and costs, while getting consumers to increase control over their consumption.



ENEL PEOPLE

Social dialog, social protection and wage guarantees, in line with ILO standards



SUPPLIERS

Support for increasing resilience in the transitioning economy and the diversification of 'net-zero' critical technologies



COMMUNITIES

Contribution to socio-economic development, with a focus on those transitioning away from fossil fuels generation



CUSTOMERS

Support in electrification journey and to access affordable, secure and green energy

TRANSITION OUT



Upskilling/reskilling, redeployment, sharing of knowledge

Joint work on circular and low carbon supply models + upskilling/reskilling for workers whose jobs may disappear

Development of individual and multi-stakeholder activities to manage challenges and create shared value opportunities

Analysis of barriers and intervention areas to facilitate dropping out of conventional technologies

TRANSITION IN



Upskilling/reskilling to green jobs and digital

Supplier development program (managerial and technical training to foster business reconversion and internationalization)

Access to credit, inclusive business products, training aimed at facilitating access to employment and gender-gap reduction

Empowerment and accessible and inclusive transition

Cross and tailored stakeholder engagement

Stakeholders' engagement

Enel promotes broad engagement with internal and external stakeholders aimed at enhancing their awareness and developing a constructive dialogue that can contribute valuably to a just transition.

Awareness raising campaigns are a focal element to empower stakeholders in the transition to net zero, with particular attention to the most vulnerable. These activities to this end are tailored to:

- people working in the organization, to support their commitment and sense of purpose as well as nurturing a culture of inclusion;
- suppliers, to support their path of change and growth

Transition out

Enel has set out a clear roadmap for decarbonizing its energy mix and, in this context, it takes into account the needs of direct and indirect workers, communities, suppliers and customers, and is committed to inclusive practices through initiatives in which individual conditions, economic and social development and the general wellbeing of the community are closely linked.

Consistently with its commitment to a just transition, Enel has developed a plan in order to support stakeholders who may be negatively affected by the decarbonization pathway. Specifically, the plan for exiting thermal generation entails:

- Enel people | maintaining and developing skills and know-how transfer:
 - agreed redeployment based on individual characteristics either in the same Business Line, on the renewable side, or in other Business Lines, in order to enhance human capital and know-how. In this regard, agreed redeployment (which also involves workers' representative bodies) is accompanied by reskilling and upskilling plans for strengthening existing skills

since the transformation of the energy sector coupled with the push on digital requires a different approach to executing works or providing goods and services;

- local communities in the Company's area of influence with whom it is in place a structured approach to set up a broad, inclusive and ongoing dialogue to identify shared solutions. Enel is, in fact, committed to ensuring that new projects related to the decarbonization process are developed in consultation with the communities affected to seek their consent;
- customers, whose active participation to the transition needs to be fostered and supported.

or developing new skills needed in the new role. Re-deployment does not negatively affect the contract type and the wages of those concerned;

- voluntary access to early retirement plans for those who are eligible.
- Site repurposing/regeneration:
 - replacement of thermal power plants with renewable or hybrid plants, *i.e.*, a combination of green technologies such as, for example, renewables, storage, hydrogen; land reclamation and maximization of the reuse of abandoned structures, such as roads, infrastructure, high-voltage connections, buildings, etc., in line with Enel's circular economy principles;
 - engagement with affected communities and development of multi-stakeholder projects to foster the creation of shared value throughout the project, from the preliminary talks to the choice of which redevelopment projects to pursue;
 - third-party projects not in energy fields that meet the needs of the communities in which the facilities are located.

2023

30% of people leaving coal-fired plants in 2023 have been redeployed and have attended upskilling/reskilling programs; the remaining **70%** have retired or have been involved in early retirement programs

Redeployed coal plants people:

~80% within the Enel Green Power and Thermal Generation perimeter

~20% in other Enel business areas

2024-2026

80% of people leaving coal-fired plants will be redeployed and the remaining **20%** will be involved in early retirement plans

Overall reskilling and upskilling dedicated to total Enel people: up to **40%**

Strengthening of the “internal training” approach

Transition in

Similarly to transition out, the path to a ‘green’ and digital future must also be led in an inclusive way to enable all stakeholders to seize the opportunities and manage the risks involved. Like actions to promote requalification, vocational training, and self-learning, in the case of direct

and indirect workers, support for business diversification and increased resilience for supply chain companies, as well as generation of value for communities, through access to local job opportunities, and facilitating access to products and services for customers.

Enel people | Lifelong learning

The rapid and continuous evolution of the business and the support to a fair transition strategy towards low carbon technologies and services entail the need for new technical and professional profiles and the awareness that some jobs will disappear. In this context, lifelong learning becomes essential. Empowerment becomes therefore crucial to evolve culturally, because it allows to fully involve people, motivating them to express their potential, while at the same time providing them with opportunities for personal and professional development, and contributing to create conditions of well-being, motivation, responsibility and participation that will enable the achievement of strategic objectives.

Among the initiatives implemented:

- retraining and professional updating, up/reskilling, self-learning and knowledge transfer. The various schools & academies of Enel’s Business Lines have organized existing skills enhancement programs to allow participants to access more advanced career paths (upskilling) and to learn new skills (reskilling) that enable people to fill positions and roles different from their previous ones, while also enhancing soft and transferable skills. These programs were implemented also in collaboration with university and academic partners;



Enel people

94% of the population involved in training activities

~3.1 million hours of training provided (**~48 hours per capita average**), of which approximately **45%** is dedicated to upskilling and reskilling

~480,000 hours delivered, dedicated to the topics of **digital skills** (**15%** of total training hours)

- supporting the dissemination of digital culture and the utilization of digital media;
- promoting the presence of women in STEM (Science, Technology, Engineering, Mathematics) classes and jobs.

For more details see the chapter “**Enel people**”.



Suppliers | Supporting change

Suppliers are essential partners in the journey to decarbonization. In this sense, actions in place aim, on the one hand, at supporting their increased resilience and, on the other, to minimize pressure on critical materials and components through continued technology innovation and recycling. This is why Enel works jointly with suppliers to develop new metrics and promote co-innovation projects to support decarbonization and circular economy approaches, all of which will have a positive impact on their production processes and purchasing methods.

There are several initiatives to support supplier business conversion and diversification such as, but not limited to:

- the Supplier Development Program, which places a specific focus on SMEs operating in strategic sectors that will benefit from direct support for facilitated access to services (e.g., liquidity sources, management and technical training programs, advice on sustainability and the circular economy);
- the “Sportello imprese” (business desk), which consists in meeting periodically with companies from the traditional power generation sector to support their growth and requalification in areas such as renewables or new services related to energy efficiency;
- “Energie per Crescere” (Energies for Growth), a program which aims to strengthen Enel’s supply chain creating highly requested professional profiles in the electricity sector. The program particularly involved E-Distribuzione contractors, creating jobs that are in high demand in the industry (e.g., cable pullers, cable splicers, substation assemblers, live-line workers);
- “Energie per la Scuola” (Energies for School), a program for final year students attending technical and vocational schools with the aim of training them for the

Suppliers

5,500⁽¹⁾ people receiving training as new technicians for contractors as part of the “Energies for Growth” project

4,000⁽²⁾ people already trained in network infrastructures (completion in 2025), of which approximately **2,600** new technicians hired as part of the “Energies for Growth” project

550⁽²⁾ people trained for the new professions of the energy transition, hired and in the process of being hired as part of the “Energies for School” project

(1) By 2025.

(2) Cumulative figures, 2022-2023.

‘most wanted’ roles in the electricity sector so that, after graduation, they can be hired by Enel contractors. The aim is to create a bridge between education and the professional sphere, encouraging the students to acquire the skills needed to embrace the new professions of the energy transition, and facilitating their entry into the workplace with the Group’s suppliers immediately after graduation, also through greater knowledge of the industrial realities in the industry.

For more details see the chapter
“**Sustainable supply chain**”.



Communities | Creating value for local communities

Enel's commitment to supporting communities is expressed through initiatives that promote inclusion (with particular focus on people in conditions of physical, social and economic vulnerability) both in terms of access to local job opportunities and facilitating access to products and services. These initiatives are the result of strong and lasting community relationships in which there is broad, inclusive and continuous dialogue based on clearly defined phases of "stakeholder engagement" in line with international reference standards.

Communities

about **3.9 million beneficiaries**, in line with the Sustainable Development Goals (SDGs), mainly relating to projects and initiatives associated with the 3 SDGs to which the Group has made a commitment (SDGs 4, 7, 8)

For more details see the chapter "**Engaging communities**".



Customers | Empowering the transition

Energy and digital technologies are key factors empowering the transition of customers through new services and promoting greater understanding of and control over their consumption, along with the affordability of green technologies (whether electric mobility, photovoltaic or heat pumps), the lack of affordability is a significant barrier especially for low-income and vulnerable customers already struggling with primary energy costs who paradoxically could benefit most from their adoption.

Technologies such as smart meters increase customer awareness of their own consumption habits, which encourages more efficient and sustainable behaviors. Energy suppliers and service providers can help consumers make the best use of new technologies (heat pumps, electric transportation, efficient appliances) by designing user-friendly services (that also leverage digital) and offerings that reduce complexity and costs.

The enormous amount of data created by the growing role of connected devices offers a great opportunity to engage customers in the transition with customized solutions that combine security and data privacy.

Customers

~68 GW of distributed renewable capacity connected to Enel grids from around **2 million** connections from producers and prosumers

~9.6 GW of contracted capacity for flexibility services

24,300 publicly owned charging points⁽¹⁾

(1) It should be noted that the figures shown, if they also included the charging points of companies operated in joint ventures, would be 25,337 as of December 31, 2023.

For further details see the chapter "**Customer centricity**" of this document.



Enel's impact on climate change

3-3 | 201-2 |

ENEL'S IMPACT ON CLIMATE CHANGE IN 2023

	CO ₂ -free generation ⁽¹⁾	Digitalization of the grid	Electrification of energy demand and promotion of energy efficiency
POSITIVE IMPACTS	86.0 MtCO _{2eq} avoided	45.2 million end users with active smart meters ⁽³⁾	24,300 charging points for electric mobility
	<ul style="list-style-type: none"> • Avoided greenhouse gas emissions from electricity generation • Contribution to greenhouse gas emission reduction in other sectors⁽⁷⁾ through a zero-emission energy mix 	<ul style="list-style-type: none"> • By providing data in quasi real time, smart meters allow an efficient management of the energy supply and demand, promoting informed and sustainable consumption 	<ul style="list-style-type: none"> • Contribution to greenhouse gas emission reduction in other sectors through the electrification of consumption, including transport by promoting electric mobility
	970 MW	2.5 average number of service interruptions per client (SAIFI) ⁽⁵⁾	9.6 GW of demand response capacity
	<ul style="list-style-type: none"> • Increase in storage capacity⁽⁴⁾ 	<ul style="list-style-type: none"> • A reliable and resilient network contributes to reduce the greenhouse gas emissions associated with grid losses 	<ul style="list-style-type: none"> • Solution that enables greater flexibility and more efficient use of infrastructure and energy resources for commercial and residential customers

VALUE CHAIN

GENERATION



GRIDS



RETAIL



NEGATIVE IMPACTS	32.7 MtCO _{2eq}	2.7 MtCO _{2eq}	24.0 MtCO _{2eq}
	<ul style="list-style-type: none"> • Direct greenhouse gas emissions for electricity generation (Scope 1)⁽⁶⁾ 	<ul style="list-style-type: none"> • Indirect greenhouse gas emissions associated with technical losses from the grid (Scope 2)⁽⁷⁾ 	<ul style="list-style-type: none"> • Indirect greenhouse gas emissions associated with the purchase of electricity from other producers for sale to the end customer in the retail market (Scope 3)
	6.9 MtCO _{2eq}		16.8 MtCO _{2eq}
	<ul style="list-style-type: none"> • Indirect greenhouse gas emissions deriving from the extraction and transport of fuels and subproducts⁽⁸⁾ (Scope 3) 		<ul style="list-style-type: none"> • Greenhouse gas emissions associated with the use of natural gas sold on the retail market (Scope 3)

Thermal production

Technical losses from the grid

Sales of retail electricity and gas

(1) Includes renewable and nuclear power generation.

(2) The GHG Protocol requires the consumption of electricity to be considered when calculating the Company's carbon footprint as indirect emissions (Scope 2).

(3) Of which second-generation smart meters 28.7 million in 2023 and 25.2 million in 2022.

(4) Includes contribution of Global Power Generation Business Line.

(5) SAIFI, System Average Interruption Frequency Index.

(6) Other Scope 1 emissions were indicated in the paragraph "Enel's performance in tackling climate change" in this chapter.

(7) Other Scope 2 emissions were indicated in the paragraph "Enel's performance in tackling climate change" in this chapter.

(8) Includes indirect emissions related to the extraction and transportation of natural gas sold to end customers in the retail market.

Electricity is essential to guarantee the sustainable progress of modern societies and represents a key factor in reaching the goals of the United Nations 2030 Agenda, in particular SDG 7, to guarantee everyone accessible, reliable, sustainable and modern energy, and SDG 13, regarding climate action.

Electricity generation has always played a key role in climate change, as the use of fossil fuels is a considerable source of greenhouse gas emissions. Technological development, in particular in the area of renewable energies, has however completely transformed this scenario by making electricity one of the main solutions for reducing the carbon footprint world-wide. Enel is aware of these impacts and implements specific actions to minimize them, promoting the decarbonization of the energy system and the electrification of the energy demand. As a result this reduces the greenhouse gas emissions along the entire value chain.

Recognizing the relevance to business of the social impacts of its climate strategy, Enel fully supports the principles of a just transition that leaves no one behind by developing specific initiatives aimed at accompanying Enel people, suppliers, communities and customers on the path to decarbonization.

Enel's **power generation from fossil fuels** (mainly gas and coal) traditionally represents the main source of greenhouse gas emissions. In particular, in 2023, direct emissions (Scope 1) related to generation from fossil sources amounted to about 32.7 MtCO_{2eq}, while indirect emissions (Scope 3) related to fuel extraction and transportation amounted to 6.9 MtCO_{2eq} (also considering those related to the extraction and transportation of natural gas sold to end customers). Enel is reducing this impact by accelerating the decommissioning of coal-fired plants, with a reduction of capacity in 2023 of approximately 2 GW compared to 2022. In parallel, the Group is increasing the development of renewable capacity that, together with the contribution of nuclear generation, has made it possible to avoid 86.0 MtCO_{2eq} emissions. Furthermore, Enel is actively committed to

the development of electricity storage systems that support the integration of renewable capacity, with a total installed capacity of 1,730 MW in 2023 (BESS⁽³⁾ and storage behind the meter). The decarbonization of the energy mix also has a positive impact on the reduction of indirect greenhouse gas emissions (Scope 2) associated with the purchase of electricity to cover the requirements of business activities.

Management of the electricity network leads to the generation of indirect greenhouse gas emissions (Scope 2) associated with technical grid losses, equal to 2.7 MtCO_{2eq} in 2023 (according to the location-based calculation methodology). Enel is actively investing in the digitalization and automation of the electricity grid to reduce these losses and increase the reliability of the grid, while promoting the diffusion of renewables in the energy system.

Regarding **end users**, the use of the products sold by Enel's customers generates GHG emissions that are accounted for as indirect (Scope 3). In particular, the emissions related to the use of electricity sold to customers were 24.0 MtCO_{2eq}, whereas those related to gas sold equaled 16.8 MtCO_{2eq}. Enel regularly monitors these emissions and adopts measures aimed at minimizing them. Furthermore, Enel offers its customers technical solutions to reduce carbon emissions related to their energy consumption in a wide range of sectors, including transport, property management as well as industrial processes and services. For example, with Enel X the Group is promoting the deployment of owned public charging infrastructure for electric vehicles (24.3 thousand charging points installed in 2023⁽⁴⁾), the development of energy efficiency solutions, distributed generation, energy consultancy services, smart street lighting and circular cities.

Emissions related to the **activities of the Group's suppliers** amounted to 8.8 MtCO_{2eq} in 2023. To reduce this impact, Enel adopts a circular procurement approach and includes assessments of the carbon footprint of the products and services involved in its purchasing processes, encouraging their reduction.

(3) Battery Energy Storage System.

(4) For charging points including companies operated in joint ventures, the total amount is 25,337 as of December 31, 2023, and 22,617 as of December 31, 2022.

Enel's advocacy system on climate policies and a just energy transition

In Enel, advocacy on the issue of climate change aims to promote and define:

- **ambitious climate and decarbonization targets** consistent with the objectives set by the Paris Agreement;
- **effective and efficient implementation mechanisms** capable of exploiting market dynamics, by fully supporting the role of carbon pricing where appropriate;
- **a clear governance framework** that ensures transparency and clarity at the planning stage but also predictability and responsibility at the implementation stage, in order to ensure effective legal and regulatory frameworks in promoting the necessary investments;
- **constructive dialogue within multi-stakeholder initiatives**, actively contributing to groups and coalitions such as the Just Transition Think Lab, the Caring for Climate initiative of the UN Global Compact, the Energy Advisory Group of the We Mean Business Coalition, the Policy Advocacy & Member Mobilization (PAMM) and Carbon Capture Storage & Removal projects of the World Business Council for Sustainable Development (WBCSD);
- **recognized private sector leadership in climate and energy** through its continued participation in initiatives such as the CEO Alliance, the CEO Climate Leaders Alliance and the First Movers Coalition (FMC) of the WEF, the Utilities for Net Zero Alliance, the Global Sustainable Energy Partnership, and regional and national trade associations;
- **the creation and sharing of knowledge** by supporting the activities of the Fondazione Centro Studi Enel (Enel Foundation), an Italian think tank founded by Enel SpA that seeks to contribute to solving the greatest challenges of our time in the areas of climate and energy transition.

Enel is committed to carrying out its direct and indirect public advocacy actions in line with the Paris Agreement and with the target of limiting global warming to below 1.5 °C. Evoking the original spirit of the Agreement, it does this by involving a wide range of stakeholder including public institutions, trade associations, non-governmental organizations and academia. The aim is to promote the

Group's vision on climate, zero greenhouse gas emission policies and a roadmap to a just energy transition. Through its direct advocacy, Enel interacts with policy makers, while indirectly it contributes to positioning and debate in trade associations. The goal is to build consensus and support for the path to decarbonization of the global economy, which is the goal of the Paris Agreement.

The global coordination of the Enel Group's advocacy on climate policies is provided by the Energy and Climate Policies unit. This unit is responsible for ensuring the consistency of global scenarios and positions of the Group on climate policies with the support of Countries and the Global Business Lines. Its objective is to guide Enel's national and local advocacy activities, thanks to a continuous dialogue with institutions and the widest possible range of stakeholders who are active in the climate debate.

At the local level, in countries where Enel operates, its advocacy efforts are led by the institutional relations units with the support of the business units. These efforts are pursued through specific activities and broader stakeholder engagement on the issues of decarbonization and a just energy transition, adopting an approach similar to the one adopted at the global level. Enel's advocacy in this area is implemented through *ad hoc* engagement on specific legislative proposals (e.g., the European Climate Law), but also through broader stakeholder engagement at the national level through Enel's Energy Transition Roadmap platform.

Enel continuously assesses the alignment of its direct advocacy actions with the goals set by the Paris Agreement. In fact, in accordance with the Group's "Climate change risks and opportunities" policy, the Group's climate advocacy activities are guided by energy transition roadmaps, through which Enel engages a wide range of stakeholders in relation to the actions needed at the national level to pursue the goals of the Paris Agreement. These energy transition roadmaps are developed for each country where the Group operates and updated in line with any changes in regulatory, technological and market dynamics.

Direct advocacy. The Group's positioning on key climate policies

During 2023, numerous policies and regulatory provisions were enacted concerning climate and the related energy and environmental issues. In this context, the number of dossiers on which Enel focuses its advocacy efforts increases each year, and only the most relevant are listed below, along with the positions taken by the Group.

Globally:

Negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) continued leading to a final agreement on the COP 28 Decision in Dubai. Highlights of the agreement include: a call for the mobilization of additional efforts in the phase-out of fossil fuels, aimed at tripling global renewable energy capacity and doubling the average annual rate of energy efficiency improvement by 2030; concrete support for developing countries to strengthen their resilience to climate change; and a strengthening of climate finance through the Green Climate Fund and other dedicated funds. Enel has been active in promoting greater ambition, the implementation of the **Transparency Governance Framework**, the development of mechanisms to ensure a just transition and the full mobilization of the climate finance envisaged by the Paris Agreement including the rapid development of international cooperation as envisaged by Article 6 of the same Agreement. **Enel contributed to COP 28** in Dubai by **participating in initiatives** promoted in cooperation with **public and private players**. Enel joined the **Utilities for Net Zero Alliance (UNEZA)**, an initiative aimed at fostering international cooperation to accelerate the energy transition, which is coordinated by IRENA, supported by WEF and promoted by the UN High-Level Climate Champions. The Spanish subsidiary **Endesa** was **recognized as an "Energy Transition Changemaker"** for the project of just transition of the thermal power plant in Andorra, Teruel. The Group's unwavering commitment has been recognized by its **ranking at the top of the Influence Map classification regarding Corporate Engagement at COP 28** (<https://cop28.influencemap.org/CorporateInfluence-Database>).

At European level:

During 2023, the Group represented its interests and promoted its position vis-à-vis the European institutions (Commission, Parliament, Council) with the aim of contributing to legislative proposals and decisions that could have affected the EU's Climate and Energy Policy Framework, and the Group's activities. In carrying out these activities, Enel is committed to acting in a transparent and responsible manner. As such, it is registered with the European Transparency Register⁽⁵⁾, whose specific activities are related to major EU legislative and/or policy proposals. In addition, Enel's positions and responses to EU consultations (such as the Critical Raw Materials Act) are made public, together with a list of the main professional associations and think-tanks in which Enel is active. During 2023, Enel carried out its advocacy work in relation to several European dossiers, including:

- **evolution of the ETS system and introduction of the Carbon Border Adjustment Mechanism (CBAM)**. Specific proposals at the European level have resulted in: a) consolidation of the current CO₂ trading system by increasing its ambition and revising the internal mechanisms for market stabilization and allocation of free allowances; b) creation of an additional allowance trading system for the transport and building sectors; and c) introduction of a Carbon Border Adjustment Mechanism (CBAM) to ensure that a carbon price is also applied to major imported goods with high CO₂ content. Enel proactively supported the proposals with a view to ensuring ambition consistent with the Paris Agreement, protecting European competitiveness and the most exposed segments in the context of a just transition, and strengthening CO₂ price predictability to support investment;
- **the hydrogen strategy, the hydrogen and gas market decarbonization package, the methane gas regulation**. The important role of fossil gas in transitioning to decarbonized gas has been addressed at both the strategic and regulatory levels with these measures. Enel participated in the debate by actively promoting green hydrogen (generated by electrolysis powered by 100% renewable energy) and by participating in the "Energy Pathway" project sponsored by WBCSD, with the aim of monitoring developments in the hydrogen market. With

(5) <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=6256831207-27&locale=en#en>, number 6256831207-27. By registering, Enel signed the Transparency Register Code of Conduct and also declared that it is bound by its own Code of Ethics.

regard to the gas package, it promoted clear distinction in the sphere of the tariff and incentive systems. Lastly, when discussing the regulation, Enel promoted targets consistent with the European decarbonization pathway along with systematic monitoring;

- **directives on energy efficiency and the energy performance of buildings.** The two measures further increased targets for efficient energy use, envisaging among other things at least an 11.7% reduction in energy consumption, strengthening the active role of buildings in electric systems through targets for the installation of electric vehicle charging points and distributed renewable energy generation facilities. Enel actively participated in the debate by advocating for the role of clean electrification as a vector that can ensure benefits not only in terms of combating climate change, but also with regard to energy efficiency, competitiveness, economic circularity and improved air quality, especially in urban areas;
- **revised renewable energy directive.** The revision provided for increased targets for the development of renewable energy sources, which are considered strategic for Europe both in terms of decarbonization and energy independence. It also introduced a number of measures to further facilitate their dissemination throughout the territory. Enel strongly supported the goals of the directive, given the central role that renewable sources play in its Industrial Plan. Enel's advocacy is based on the belief that the EU regulatory framework should provide long-term predictability for investors, as well as simplified and harmonized authorization procedures.

At the national level, the main dossiers on which the Enel Group has taken advocacy actions include:

- **in Italy, the publication of the draft update of the National Energy and Climate Plan (NECP)** envisaged by the European regulation, which was welcomed by Enel particularly with regard to the simplification of authorization processes, the promotion of renewable sources with long-term market instruments, the recognition of the structural role of the capacity market, and the recourse to long-term market instruments for flexibility resources. In addition, the **consultation on support schemes for plants fueled by renewable sources** was

favorably received. On the critical issue of adaptation, the **National Climate Change Adaptation Plan** was approved, which Enel believes has strategic value for the resilience of the electricity sector and the Italian economy;

- **in Spain, the draft revision of the National Energy and Climate Plan was published** and the intensified ambition of the same was viewed positively by the Enel Group. Enel's advocacy activities also included proposing measures that would effectively achieve the proposed goals and highlighted the need to synchronize the share of electrification with the development of renewable energy. As regards **disclosure requirements on financial risks associated with climate change**, the Enel Group responded to the consultation by offering its support and requesting Scope 3 emissions to be considered among the indicators to be reported;
- **in the United States, the Inflation Reduction Act** continued to be rolled out with a series of implementation decrees. Enel North America supported this process by providing input on a number of legislative proposals including those related to tax credits. In addition, the Federal Energy Regulatory Commission (FERC) approved Order 2023, the most comprehensive set of reforms to the generator interconnection process in two decades. Enel North America backed the proposed reforms and gave public testimony in support of the initiatives. FERC referred to Enel's comments 247 times in the Final Rule. In multiple instances, FERC has cited and accepted Enel's specific recommendations;
- **Brazil** is in the process of passing a **bill to regulate the carbon market in the country**. Enel actively supports the initiative, which it sees as an important tool to ensure economic efficiency and effectiveness in achieving environmental goals. The **National Hydrogen Program (PNH2) has also been published, while the national low-emission hydrogen regulation is still under development**. In this context, the Enel Group supports the regulation of the hydrogen market, understood as a driver of the energy transition, and particularly the strengthening of green hydrogen. Enel also actively supports **Decree no. 11.648/2023 establishing "Energias de Amazonia"** in light of how it will help promote renewable sources and a just transition of Amazonian systems.

Indirect advocacy. Enel's commitment through associations and organizations

2-28

The Group plays an active role in various industry and multi-stakeholder associations and organizations with the aim of promoting issues concerning energy transition and climate action at the national and global level. **Enel is committed to ensuring that the various industry associations, business networks and think tanks of which it is a member operate in full compliance with the objectives of the Paris Agreement and the decarbonization roadmap established by the Group.** Enel therefore systematically verifies the **consistency of the associations' positions with the climate policies shared at the Group level.** This verification process is carried out in two stages:

- i. **before joining the association**, through an in-depth analysis of the association's by-laws, in line with the Climate Policy issued in September 2021;
- ii. **after joining the association**, actively contributing to its work and/or taking positions of responsibility within it or promoting the Enel Group's position within working groups.

A review of the level of alignment of the associations with Enel's strategy is conducted annually.

Where an association is found not to be in line with the objectives of the Paris Agreement and Enel's climate risk mitigation strategy, the Company assesses whether the misalignment could compromise the effectiveness of Enel's advocacy and participation, and may decide to withdraw from the association.

In 2023, the analysis for assessing alignment with the Paris Agreement was extended to cover all associations involved in climate advocacy activities, of which Enel is a global member. In addition, as it did last year for 2022, **for 2023 Enel has published a list, an analysis of positioning and an assessment of the Paris Agreement alignment of the most relevant associations within which Enel is active, in terms of climate policy advocacy.** The alignment level was determined based on a specific methodology using targeted evaluations on the climate science, climate policies at global and national levels, disclosures on the topic, and the technologies promoted.

In 2023, the methodology developed to evaluate the different associations was further improved to ensure the accuracy and robustness of internal processes. For each country and/or region where it is present and/or of interest, the Enel Group identified the main associations engaged in climate policy advocacy activities and conducted, for each of them, a qualitative assessment in order to identify the association's level of alignment with the Paris Agreement.



For more information on Enel's direct and indirect advocacy activities and for the complete list of associations and their evaluation, please see the "[Climate Advocacy Report 2023](#)".



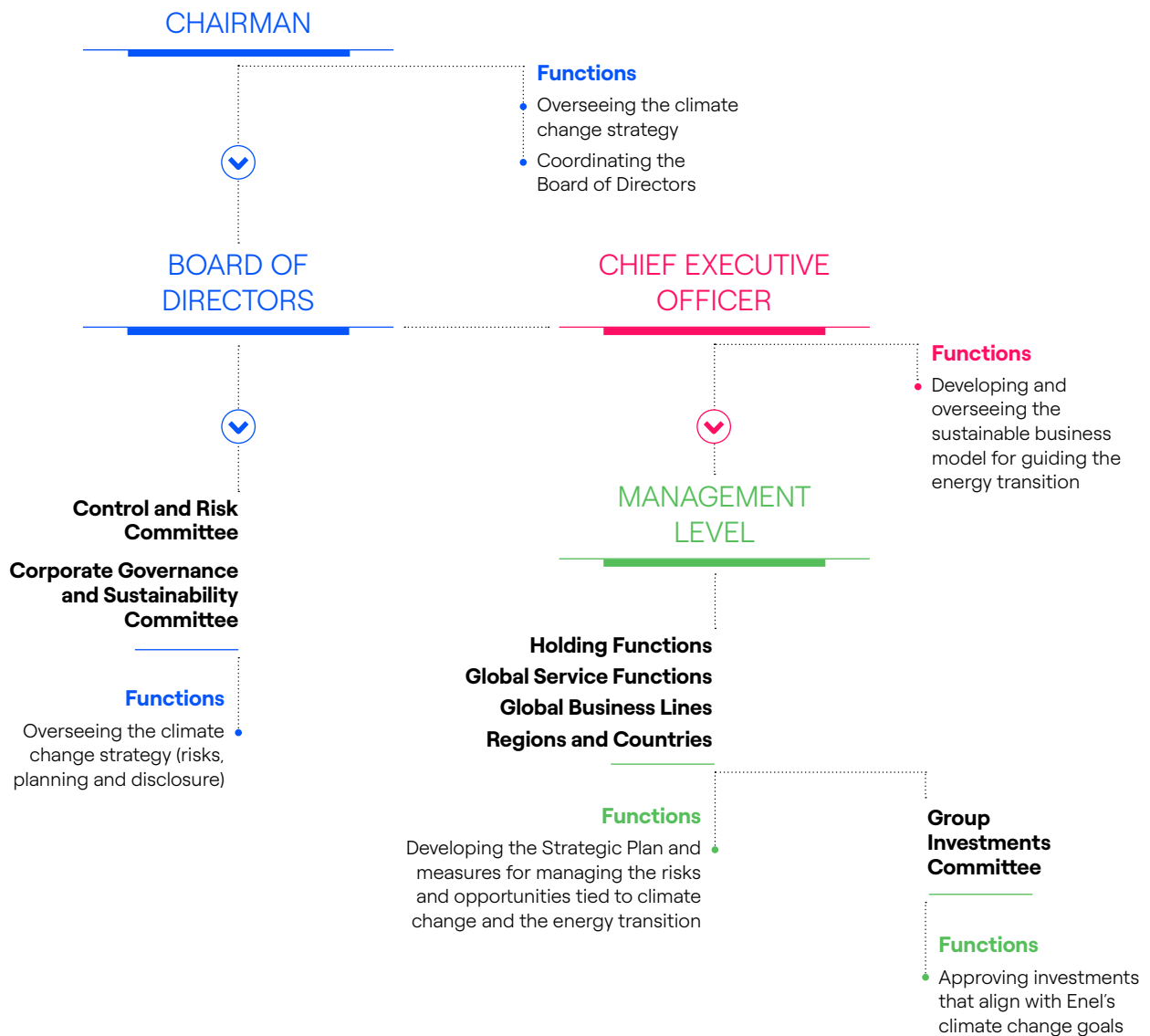
Enel's governance model to tackle climate change

| 2-9 | 2-12 | 2-13 | 2-19 | 2-20 | 2-24 | TCFD: Governance |

Competences of corporate bodies

The corporate governance system adopted by Enel is oriented toward the goal of sustainable success, given that it is aimed at creating value for shareholders over the long term, aware of the importance from an environmental so-

cial point of view of the Enel Group's operating activities and the consequent need to proceed with adequate consideration of the interests of all the relevant stakeholders.



The Board of Directors of Enel SpA:

- Pursuant to the Articles of Association, the Board of Directors of Enel SpA is endowed with broad powers for the **ordinary and extraordinary administration** of the Company and has the authority to carry out any action deemed appropriate for the implementation and achievement of the corporate purpose.
- It plays a **central role in corporate governance** as the body vested with powers related to the strategic, organizational and control policies of the Company and the Group, the sustainable success of which it pursues. In this context, the Board examines and approves the Company's strategy, including the annual budget and the Industrial Plan (which incorporate the main objectives and actions planned, including with regard to sustainability issues, to drive the energy transition and tackle climate change), taking into consideration the analysis of issues relevant to the generation of long-term value and thus promoting a sustainable business model.
- It plays a **role of guidance and assessment of the adequacy of the Internal Control and Risk Management System** (so-called "ICRMS"). In particular, the Board defines the nature and level of risk compatible with the strategic objectives of the Company and the Group, including in its assessments any elements that may be relevant in the perspective of the Company's sustainable success. The ICRMS consists of the set of rules, procedures and organizational structures aimed at effective and efficient identification, measurement, management and monitoring of the main corporate risks, including risks related to climate change and, more generally, risks that the Group's activities may determine in the fields of environment, society, personnel and human rights.
- The Board **defines the remuneration policy** for Directors, Auditors and Key management personnel, based on the pursuit of the Company's sustainable success and taking into account the need to arrange, retain and motivate people with the skills and professionalism required by the role covered, submitting this policy to the Shareholders' Meeting for approval.
- During 2023, the Board addressed **climate-related issues**, reflected in the strategies and related implementation methods in **6 of the 15 meetings held**, in particular during: (i) the review and approval of the Industrial Plan of the Company and the Group; (ii) the definition of Enel's remuneration policy for 2023; (iii) the review of the contents of the Sustainability Report for the 2022 financial year, coinciding with the Consolidated Non-Financial Statement pursuant to Legislative Decree no. 254/2016 for the same year. In addition, it discussed climate- and environment- related issues as part of the

in-depth studies dedicated to operations related to the decarbonization strategy and sustainable finance, as well as in relation to investor dialogue activities. Finally, in the event of extreme weather events, the Board of Directors received extensive information on the immediate countermeasures taken, as well as on the need to adapt infrastructures to respond to the changed context.

- As part of the annual process of assessing the competences of the members of the Board of Directors, managed by an independent third party, at the beginning of 2024 Enel assessed the Directors' competences in managing climate risks and opportunities. As a result of this assessment, it was concluded that measures should be implemented to improve the climate competence of the Board.

Consequently, the following measures were taken:

- an **ad hoc induction program on climate-related issues** was launched for all members of the Board of Directors; and
- the Corporate Governance and Sustainability Committee, established within the Board of Directors, **appointed** one of its members (Johanna Arbib) as a **non-executive and independent Director in charge of monitoring climate and zero-emission transition issues** within the scope of the Committee's competences. This member of the Board of Directors has received timely and adequate training on how climate and the energy transition affect the Group's strategy, how the Enel Group impacts climate, and the risks and opportunities for climate mitigation and adaptation for the Group.

In accordance with the provisions of the Italian Civil Code, the Board of Directors has delegated part of its management responsibilities to the Chief Executive Officer and, based on the recommendations of the Italian Corporate Governance Code, and provided for under the relevant CONSOB regulations, has appointed the following Board Committees which provide recommendations and advice.

The Corporate Governance and Sustainability Committee:

- **Assists the Board of Directors in assessment and decision-making activities concerning the Company's and Group's corporate governance** and sustainability, including climate change issues and the dynamics of the Company's interaction with all the stakeholders.
- With regard to sustainability issues, it **examines, inter alia**, (i) the guidelines of the **Sustainability Plan, including the climate objectives** defined therein, as well as the Priorities' Matrix, which identifies the priority issues

for stakeholders in light of the Group's industrial strategies; (ii) **the methods for implementing the sustainability policy**; (iii) **the general approach and structure of the contents of the Non-Financial Statement and the Sustainability Report** (possibly as a single document), as well as the completeness and transparency of the information contained therein, including on climate change, and their consistency with the principles laid down by the reporting standard used, issuing a prior opinion on this matter to the Board of Directors called upon to approve these documents.

- During 2023, the Board dealt with **climate-related issues**, reflected in the strategies and related implementation methods in **5 of the 7 meetings held**, in particular during the review of: (i) the Sustainability Report for the 2022 financial year, coinciding with the Consolidated Non-Financial Statement pursuant to Legislative Decree no. 254/2016 for the same year; (ii) the materiality analysis and the guidelines of the Sustainability Plan 2024-2026; (iii) updates on the main activities carried out in 2023 by the Enel Group in the field of sustainability, on the status of implementation of the Sustainability Plan 2023-2025 and regarding Enel's inclusion in the main sustainability indices.

The Control and Risk Committee:

- The Committee has the task of **supporting the Board of Directors' assessments and decisions relating to the ICRMS**, also as concerns climate risks and those relating to the approval of periodic annual and interim financial and non-financial reports.
- **It assesses the suitability of annual and interim financial and non-financial information** to correctly represent the business model, the strategies of the Company and the Group it heads, the impact of the Company's activities and achievements, coordinating with the Corporate Governance and Sustainability Committee as regards periodic non-financial information.
- **It examines the topics relevant to the ICRMS dealt with in the Non-Financial Statement, pursuant to Legislative Decree No. 254/2016, and in the Sustainability Report** (possibly as a single document) and containing the Company's climate disclosure, issuing a prior opinion on the matter to the Board of Directors, which is called upon to approve these documents.
- During 2023, the Board dealt with **climate-related issues**, reflected in the strategies and related implementation methods in **3 of the 14 meetings held**, in particular during the review of: (i) assessment of the relevant issues for the purposes of the ICRMS dealt with in the Sustainability Report for the 2022 financial year, coinciding with the Consolidated Non-Financial Statement

pursuant to Legislative Decree no. 254/2016 for the same year; (ii) meetings with the heads of the Global Business Line Enel Green Power and Thermal Generation in relation to the activities carried out and the risks existing in the perimeter of competence, as well as the tools used to mitigate their effects; (iii) the analysis of the degree of compatibility of the main risks related to the strategic objectives of the Industrial Plan 2024-2026.

The Nomination and Compensation Committee:

- **Supports the Board of Directors, *inter alia*, in its assessments and decisions relating to the size and optimal composition of the Board itself and its Committees, as well as the remuneration of Directors and Key management personnel.** In this regard, compensation policy for 2023 specifies that a sizeable portion of the variable compensation, both short and long term, of the Chief Executive Officer/General Manager and Key management personnel is connected, *inter alia*, to performance objectives concerning sustainability and climate.

The Chairman of the Board of Directors:

- In exercising the function of stimulating and coordinating the activities of the Board of Directors, plays a **proactive role in the process of approving and monitoring corporate and sustainability strategies**, which are strongly oriented toward decarbonization and the electrification of consumption.
- During 2023, the Chairman also chaired the Corporate Governance and Sustainability Committee.

The Chief Executive Officer:

- In exercising the powers he/she holds, the CEO **has defined a sustainable business model** by identifying a strategy targeted toward guiding the energy transition toward a low-carbon model; furthermore, within the scope of the powers assigned, the CEO manages the business activities connected to Enel's commitment to combating climate change.
- **He/she reports to the Board of Directors on the activities carried out when exercising proxies**, including the business activities aimed at maintaining Enel's commitment to tackling climate change.
- He/she represents Enel in various initiatives dealing with sustainability, holding relevant positions in insti-

tutions of international importance such as the Global Investors for Sustainable Development (GISD) Alliance launched by the United Nations in 2019.

- As the person primarily responsible for the management of the Company, **he/she is the person most empowered to deal with institutional investors**, providing them with any appropriate clarifications on matters falling within the management powers entrusted to him/her, in line with the Policy for the management of engagement with institutional investors and with the generality of Enel's shareholders and bondholders.
- **He/she holds the role of Director in charge of setting up and maintaining the ICRMS.**

The Enel organizational model for management of climate-related issues

Enel has a management team that assigns the responsibilities related to climate issues to the specific Functions that contribute toward guiding Enel's leadership in energy transition. Each area is responsible for managing the risks and opportunities related to climate change for their own area of competence.

- **The Holding Company Staff Functions** are responsible for consolidating the scenario analysis and the management of the strategic and financial planning process aimed at promoting the decarbonization of the energy mix and the electrification of energy demand, as key actions in combating climate change.
- **The Global Business Lines** are responsible for the development of activities related to promoting renewable generation, the optimization of heat capacity, the digitalization of the electricity grid and the development of business solutions that enable energy transition and combating climate change.
- **The Global Service Functions** are responsible for adopting sustainable criteria, including climate change, in supply chain management and developing digital solutions that support the development of technologies enabling energy transition and combating climate change.

- On a local level, **the Regions and Countries** have the task of promoting decarbonization and guiding the energy transition toward a low-carbon business model, within their areas of responsibility. Furthermore, the Europe and Euro-Mediterranean Affairs Function is responsible for defining the Group's position on climate change, low-carbon policies and the regulation of the international carbon market on a European level.

Additionally, **the Group Investments Committee**, chaired by the Chief Executive Officer, grants approval for the expenses for investments related to business development. This committee also has the task of guaranteeing that all investments are fully in line with the Group's commitment to promoting a low-carbon business model and reaching decarbonization by 2040.

Climate change incentive and contribution scheme

The compensation policy for 2023 provides that a significant portion of the **long-term variable remuneration** of the Chief Executive Officer/General Manager and executives with strategic responsibilities will be tied to performance objectives in relation to climate change. In particular, in the Long-Term Incentive Plan 2023-2025 the weight of the environmental objective concerning the reduction of greenhouse gas emissions was increased to 15% of the total – from 10% in the previous plan – and at the same time made more detailed in order to cover a wider range of emissions. This target now reflects the Scope 1 and 3 GHG emissions intensity relating to Integrated Power, thus covering both direct emissions relating to power generation (*i.e.*, Scope 1 emissions) and indirect emissions relating to the generation of power purchased and sold by the Group to end customers (*i.e.*, Scope 3 emissions). A gate target linked to Group Scope 1 GHG emissions intensity relating to Power Generation was associated with this target. The changes thus introduced are intended to adequately support the achievement of the 2023-2025 Strategic Plan targets related to climate change mitigation.



For further details, see the paragraph **"Enel's governance model for sustainability"** in the chapter **"Sound governance"**.

Climate change and long-term scenarios

3-3 | 201-2 | TCFD: Strategy |

The Enel Group develops short, medium and long-term scenarios for macroeconomic, financial, energy and climate conditions in order to support planning, capital allocation, strategic positioning, and risk and strategy resilience assessment.

To support its analysis of scenarios and of the external context, the Group identifies and analyzes short-, medium- and long-term trends to develop an overview of how structural forces and current macro-trends influence the speed of transition and the expected impacts in the energy sector and in particular in the businesses in which Enel operates. This trend mapping provides a basis for defining actions to orient the positioning of the business, seizing opportunities in the sector.

Benchmarking external energy scenarios is a key starting point for constructing robust internal scenarios and consists of analyzing external transition scenarios in order to compare their results in terms of energy mix, emission trends and technology choices, and to identify the main drivers of energy transition for each.

Enel's scenarios are based on an overall framework so as to ensure consistency between the energy transition scenario and the physical climate scenario:

- the "energy transition scenario" describes how the generation and consumption of energy evolves in various sectors in a specific economic, social, policy and regulatory context;
- issues concerning future trends in climate variables (in terms of frequency and intensity of acute and chronic phenomena) define the so-called "physical scenario".

In order to assess the effects of transition and physical phenomena on the energy system, the Group relies on internal models that describe the energy system for each country under analysis, taking into consideration specific technological, social-economic, policy and regulatory aspects.

The process that translates the scenario phenomena into information that is useful for industrial and strategic decisions can be summarized in five steps:



1. Identification of trends and factors relevant to the business (e.g., electrification of consumption, heat waves, etc.)

2. Development of **link** functions connecting climate/transition scenarios and operating variables

3. Identification of **risks** and **opportunities**

4. Calculation of impacts on business (e.g., change in performance, losses, Capex)

5. Strategic actions: definition and implementation (e.g., capital allocation, resilience plans)

Enel's energy transition scenarios

The energy transition scenario details how the **generation and consumption of energy** evolve in a certain geopolitical, macroeconomic, regulatory and competitive context, depending on the available technology options; it correlates with a greenhouse gas emission trend and climate scenario and, consequently, a specific temperature increase by the end of the century compared to pre-industrial values.

The main assumptions considered in defining Enel's energy transition scenarios concern the macroeconomic and energy context, regulatory policies and measures, and the evolution, costs and adoption of energy generation, conversion and consumption technologies.

The Group's reference scenario for planning is a **Paris-aligned scenario**, which envisages achieving the temperature goals of the Paris Agreement, namely, a rise in the global average temperature below 2 °C compared to pre-industrial levels, and therefore anticipating a higher level of climate ambition than **business as usual**, but without necessarily assuming that the Net Zero emissions target will be reached by 2050, considering the current level of overall ambition at a global level and the slowdown in the speed of the energy transition that the current macroeconomic and energy environment is causing locally on some transition variables.

Assumptions on commodity price trends in inputs to the Reference scenario consider a sustained increase in the price of CO₂, caused by the gradual reduction of allowances supply in the face of growing demand, and a sharp fall in coal prices, due to decreasing demand, are expected by 2030. With regard to gas, it is believed that price tensions will ease in the coming years in light of a realignment between supply and demand at a global level. Finally, oil prices are expected to stabilize gradually, for which it is estimated that demand will peak around 2030.

In order to assess risks and opportunities related to the energy transition, **alternative scenarios** were defined with respect to the reference scenario, depending on the degree of climate ambition assumed globally and locally:

- **"Slower Transition"**, a scenario in which a more medium-term approach is taken to the slowdown observable in the short term in some countries and regions. In this scenario, fuel demand will peak more gradually, and this will support energy commodity prices;
- **"Accelerated Transition"**, a scenario in which there is an increase in ambition compared to the Reference scenario, particularly with regard to certain variables. It envisages, on the one hand, an acceleration of decarbonization, driven by regulation, and at the same time a more rapid decrease in demand for fossil fuels, which inevitably will result in lower prices for these commodities in 2030.

With respect to the full achievement of the Paris Agreement to stabilize the global average temperature to within +1.5 °C, the doubt persists that some countries might continue to take a sluggish approach and fail to adopt effective measures to reduce their emissions in a timely manner, thereby delaying the process of decarbonization toward net zero emissions by 2050. Despite this, **Enel operates a business model in line with the highest ambition of Paris Agreement objectives, namely, one that is consistent with a global average temperature increase of 1.5 °C by 2100**, as certified by the Science Based Targets initiative (SBTi).



For more information on local transition scenarios (Italy, Spain, Brazil, Chile, Colombia), see the **"Group Strategy and Risk Management"** section of the 2023 Integrated Annual Report.

The physical climate scenario for the purpose of climate adaptation action

Climate change is playing an increasingly prominent role in these scenarios, with impacts not only on the transition of the economy towards Net Zero emissions, but also physical impacts that can be divided into:

- **acute phenomena**, namely short-term but rather intense phenomena such as floods, hurricanes, etc., with potential impacts on assets (such as damage and business interruptions);
- **chronic phenomena** related to structural changes in the climate, such as the rising trend in temperatures, rising sea levels etc., which can cause, for example, constant changes in the output of generation plants and in electricity consumption profiles in the residential and commercial sectors.

Such phenomena are analyzed by looking at how they will behave in the future: this is done by selecting the best available data from the output data of climate models at various levels of resolution, as well as historical data.

Among the climatic projections developed by the “Intergovernmental Panel on Climate Change” (IPCC) on a global scale, the Group has chosen three that are in line with those taken into account in the latest IPCC report as part of the sixth assessment cycle (AR6). Such scenarios are associated with emission patterns that are linked to a level of the so-called Representative Concentration Pathway (RCP), each one being related to one of five social and economic scenarios that the scientific community defines as Shared Socioeconomic Pathways (SSP). The SSP scenarios include general assumptions such as those on population, urbanization, and so on. The three physical scenarios considered by the Group are as follows:

- **SSP1-RCP 2.6**: compatible with a global warming range below 2 °C, compared with pre-industrial levels (1850-1900) by 2100 (the IPCC projects approximately +1.8 °C on average over the 1850-1900 period); the Group associates the SSP1-RCP 2.6 scenario with the **Reference** and **Accelerated Transition** scenarios in analyses that take into account both physical variables and transition variables;
- **SSP2-RCP 4.5**: compatible with an intermediate scenario, in which an average temperature increase of around 2.7 °C is expected by 2100 when compared

with the 1850-1900 period. The RCP 4.5 scenario best represents the current global climate and political context and the associated transition assumptions. This scenario projects global warming as being consistent with the estimated temperature increase that takes into account current global policies⁽⁶⁾; the Group associates the SSP2-RCP 4.5 scenario with the **Slower Transition** scenario in analyses that take into account both physical variables and transition variables;

- **SSP5-RCP 8.5**: compatible with a scenario where no particular measures are taken to combat climate change. According to this scenario, the global temperature is estimated to increase by around +4.4 °C, compared to pre-industrial levels, by 2100.

The Group sees the RCP 8.5 scenario as a worst-case climate scenario, which is used for assessing the effects of physical phenomena in a context in which climate change is particularly severe, but is not considered likely at present. The RCP 2.6 scenario is used for the assessment of physical phenomena and for analyses that consider an energy transition that is in line with the most ambitious mitigation targets.

Climate scenarios are global in nature. Accordingly, in order to determine the effects in the areas of relevance for the Group, they must be analyzed locally. The Group's active partnerships include an ongoing collaboration with the Department of Geosciences of the International Centre for Theoretical Physics (ICTP) in Trieste. As part of this collaboration, the ICTP provides projections for the main climate variables with a grid resolution that varies from approximately 12 km to approximately 100 km on the side and a time horizon of 2020-2050. The main variables are temperature, rainfall and snowfall, and solar radiation.

In this phase of the study, the future projections were analyzed for Italy, Spain and all countries of interest to the Group in South America, Central America and North America, obtaining, also due to the use of the ensemble of models, a more definite representation of the physical scenario. Similarly, the Group is also analyzing climate projection data for Africa, South Asia and South-East Asia, so as to cover all the main countries and regions where the Group operates globally.

(6) Climate Action Tracker thermometer, global warming estimates for 2100 considering the current “Policies & action” and “2030 targets only” (updated as of December 2023).

In addition to the climate scenarios provided by ICTP, the Group also uses **Natural Hazard maps**, which make it possible to obtain, with a high spatial resolution, the return times of a series of events such as storms, hurricanes and floods. The use of these maps is widely consolidat-

ed in the Group, which already uses this data based on a historical perspective to optimize insurance strategies. Furthermore, work is underway in order to be able to use this information also when processed in compliance with the projections of the climate scenarios.

Analysis of physical scenarios. Integration of climate scenarios into the Open Country Risk model

Enel has adopted a quantitative **Open Country Risk** assessment model that can accurately monitor the level of **risk of countries within its scope**, which includes four elements of risk: economic, institutional and political, social and energy. This work has made it possible to **also integrate climate change aspects into the Open Country Risk model**.

More specifically, by introducing extreme weather events into the Open Country Risk model, the evolution of several climate hazards can be

assessed, both in the country and on a global scale, in a uniform manner. In particular, a modular approach was adopted that will enable analyses to be progressively improved by including new physical phenomena and fine-tuning methodologies and reference data. **At present, it includes four climate phenomena: two are related to extreme temperatures, one to heavy rainfall and another to drought.** In addition, the possibility of introducing other phenomena such as extreme wind and rising sea levels is being looked into. Phenomena are described with a numerical index, developed by taking into consideration global distribution, with a resolution of approximately 100 km x 100 km and summarized in a composite index.



For more information on the physical scenarios and variables considered, including acute phenomena (heat waves, extreme precipitation, cold spells, fires) and chronic phenomena (temperature, precipitation), see the "**Group Strategy and Risk Management**" section of the 2023 Integrated Annual Report.

The strategy for tackling climate change

3-3 | 201-2 | TCFD: Strategy |

Enel's climate action efforts are one of the key pillars of the Group's strategy in both the short and long term. Enel plays its part on the one hand through its contribution to driving the global energy transition towards a zero-emission model as a **mitigation** lever, and on the other by defining the best **adaptation** measures in order to adjust to changes that will, with a greater or lesser frequency and intensity, eventually take place.

Mitigation includes all initiatives intended to minimize the impact on the climate of the Group's activities and those of its stakeholders, in other words, all measures taken to reduce greenhouse gas emissions.

Adaptation, instead, includes all the initiatives implemented by Enel so as to make its assets more resilient, increase its capacity to react to extreme climatic events, and come up with strategic options and business models that will address various needs as the climate changes.

Enel's strategy for climate mitigation

MAIN COMMITMENTS

ENEL COLLABORATES WITH ALL STAKEHOLDERS TO ADDRESS CLIMATE CHANGE



FINANCIAL COMMUNITY AND PARTNERS

- Enel Capex plan fully aligned with Net Zero targets to 2040
- Sustainability-Linked instruments to finance Enel's decarbonization strategy



PLANET

- Exit from coal power generation
- Abandoning gas by 2040
- 100% renewable fleet by 2040



CUSTOMERS

- Exit from gas retail by 2040
- 100% sales from renewable sources by 2040



EMPLOYEES, SUPPLIERS AND COMMUNITIES

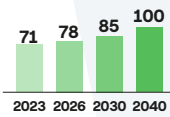
- Decarbonization of the supply chain by 2040
- Dialogue, engagement and collaboration in line with the principles of a just transition

MAIN BUSINESS DRIVERS

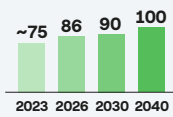
SHIFTING ENEL'S BUSINESS MODEL TOWARD ZERO EMISSIONS



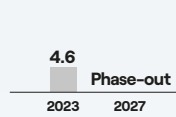
~% RENEWABLE CAPACITY OUT OF TOTAL⁽¹⁾



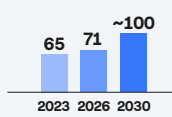
~% GHG-FREE POWER GENERATION OUT OF TOTAL⁽²⁾



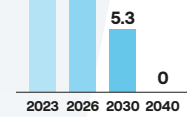
COAL-FIRED CAPACITY INSTALLED (GW)



% OF GRIDS CUSTOMERS DIGITALIZED

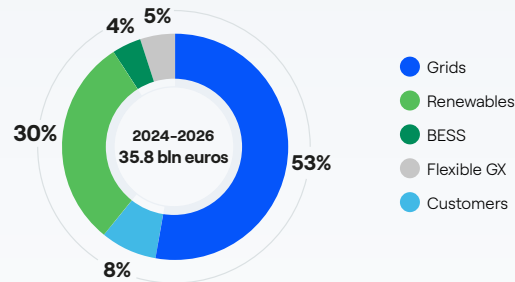


GAS VOLUMES - RETAIL MARKET (BCM)



FINANCIAL FIGURES

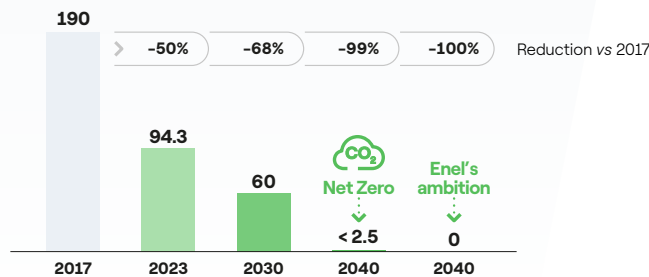
ALLOCATING INVESTMENT TO ACCELERATE THE ENERGY TRANSITION



IMPACT ON CLIMATE

DECARBONIZING THE ENTIRE VALUE CHAIN

Absolute GHG emissions (Scope 1, 2 and 3), MtCO_{2eq}



(1) Includes managed capacity and BESS.
(2) Includes managed power generation.

The Group leads the energy transition, through the decarbonization of electricity generation, the push for electrification of end-use consumption, and the development and digitalization of distribution networks. These factors represent opportunities both to increase value creation for all stakeholders and to contribute to a more rapid achievement of the Paris Agreement goals as well as the Sustainable Development Goals (SDGs) defined by the United Nations in the 2030 Agenda.

Specifically, the main mitigation actions the Group is taking are as follows.

- **Coal phase-out:** the Group confirms its goal to exit from coal power generation by 2027, subject to approval from the relevant authorities. As far as the conversion of coal-fired power plants is concerned, the Group will evaluate the best available technologies, based on the needs indicated by the distribution network operators.

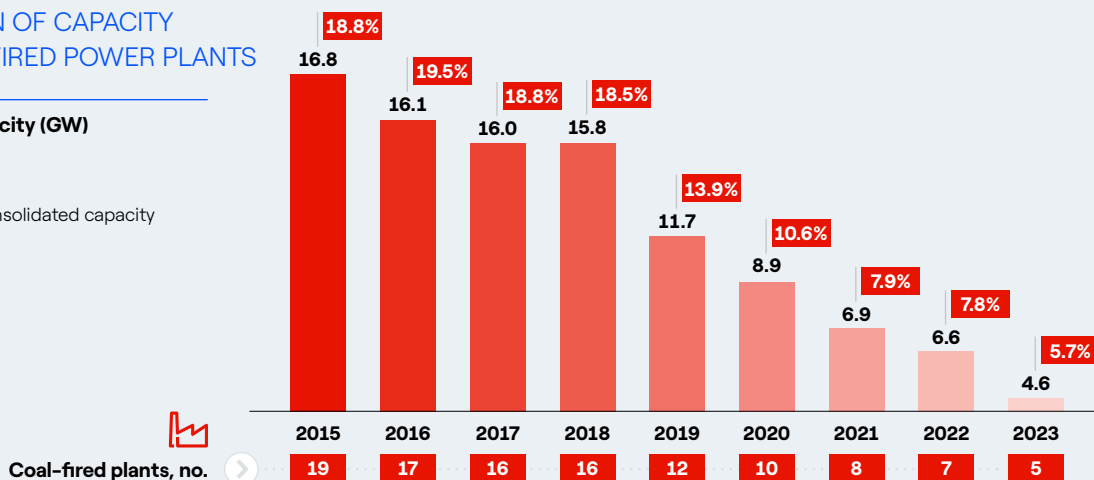
ENEL'S COMMITMENT TO COAL PHASE-OUT

Over the last decade, Enel has progressively reduced its exposure to coal power generation, in line with the strategy undertaken in terms of decarbonization of generation.

EVOLUTION OF CAPACITY OF COAL-FIRED POWER PLANTS

Installed capacity (GW)

— % of consolidated capacity



In 2023, the Fusina plant in Italy and As Pontes plant in Spain, with a capacity of 0.5 GW and 1.4 GW respectively, were taken out of service⁽¹⁾.

To date, 5 plants therefore remain available for operation: 3 in Italy, 1 in Spain and 1 in Colombia.

TORREVALDALIGA NORD – 1.8 GW

- **Essential plant:** No
- **Planned phase-out:** Progressive to 2025
- **Risk factors:** The authorities may delay closure authorization

SULCIS – 0.5 GW

- **Essential plant:** Yes
- **Planned phase-out:** 2027
- **Risk factors:** Closure of plant subject to the construction of the Tyrrhenian link Sardinia-mainland Italy transmission link

FEDERICO II – 1.8 GW

- **Essential plant:** No
- **Planned phase-out:** Progressive within 2025
- **Risk factors:** The authorities may delay closure authorization

ALCUDIA – 0.2 GW

- **Essential plant:** No (production limitation)
- **Planned phase-out:** 2027
- **Risk factors:** Plant closure subject to the realization of the second Mallorca-mainland Spain transmission link

TERMOZIPIA – 0.2 GW

- **Essential plant:** Yes
- **Planned phase-out:** 2027

Enel's coal phase-out in Italy and Spain is in line with the two countries' objective of phasing out coal-fired power generation. The process of closing a coal-fired power plant is not solely the Group's responsibility, but is subject to an approval procedure.

For example, in Italy, in line with the legal provisions currently in force on the decommissioning of generation plants (i.e., Article 1 *quinquies*, Legislative Decree 239/2003), the planned steps are:

- Enel's application to the Italian Ministry of the Environment and Energy Security ("MASE") for the purpose of authorizing the definitive decommissioning of the plant;
- MASE requests an opinion from Terna on the possibility of proceeding with the decommissioning of the aforementioned plant;
- Terna, following assessments of the adequacy of the electricity system, provides an opinion to MASE;
- following Terna's opinion, MASE communicates its acceptance or refusal of the final decommissioning.

Enel's coal exit target by 2027, subject to the authorization process set out above, may be subject to changes on the basis of the new targets contained in the PNIEC for Italy and Spain, which will be subject to approval by the European Commission in 2024.

In line with the commitment to a just transition, the exit plan entails:

- the redeployment of existing skills and the development of new ones, as well as the transfer of know-how for Enel people;
- the repurposing/regeneration of sites through requalification into innovative integrated energy hubs, i.e., sites where electricity production coexist, in particular photovoltaics and storage systems (BESS) as well as projects developed by third parties in line with sustainability programs agreed with the territories in the area of influence, so as to promote the economic and social development and general well-being of the community.

(1) With particular reference to Italy, the decommissioning is definitive, i.e.:

- from the point of view of the electricity market and the national grid operator (Terna), the plant is no longer present among the electricity production plants and consequently no longer participates in the electricity market and cannot be commissioned directly by Terna;
- from a corporate point of view, there are no longer any MW associated with that installed capacity and there will therefore be no revenues associated with its operation;
- from a plant engineering point of view, there is no longer any coal in the power plant depots and the process of permanent safety of the mechanical and electrical machinery present has begun.

- **Decarbonization of the energy mix:** the Group is committed to achieving 100% renewable capacity by 2040, with an interim target of approximately 85% in 2030, up from 68% in 2023, including managed capacity and Battery Energy Storage Systems (BESS). The acceleration of renewables, together with the closure of coal-fired plants, will achieve greenhouse gas-free generation of around 90% by 2030 and 100% by 2040 (considering consolidated and managed generation), due also the Group's exit from thermal power generation by the same year.
- **The push for electrification and the retail gas phase-out:** the Group is committed to encouraging customers to shift from gas to electricity through the development of more efficient and convenient electric technologies for consumers, minimizing the gas portfolio of customers in the medium and long term. In particular, Enel plans to increase its customers⁽⁷⁾ unit consumption of electricity from 2.65 MWh/customer/year in 2023 to around 3.5 MWh/customer/year in 2030, helping to reduce gas volumes sold to about 5.3 bcm in 2030 (compared to 8.3 bcm in 2023), aiming to complete the phase-out of gas sales to end customers by 2040. Ultimately, 100% of the electricity sold to the end customer will be generated from renewable sources.
- **Grids development and enhancement:** the grids, as the core foundation of the energy transition, will become more digital and flexible to connect millions of customers and prosumers and balance the intermittent supply of energy generated directly from renewable plants or accumulated in storage systems. Enel expects to reach about 6 million distributed generation connections by 2030 and also 100% digitalization of grid customers, compared to 65% in 2023.

The climate change mitigation strategy will help reduce direct and indirect greenhouse gas emissions along the entire value chain by around 68% by 2030 and at least 99% by 2040, compared to 2017, well above the overall threshold set by the main international standards (90%). This reduction will be implemented through **various targets**

covering both direct and indirect emissions throughout the Group's value chain, in line with the Paris Agreement and the 1.5 °C scenario, as certified by the Science Based Targets initiative ("SBTi") and detailed in the paragraph "Enel's roadmap to decarbonization" in this Sustainability Report.

In any case, the **Group's ambition is to aim for zero emissions, both direct and indirect**, although several exogenous factors shall be overcome in the medium and long term, including the development of new large-scale emission-free technology solutions in the supply chain, as well as changes in certain market conditions and policies to promote emission-free business models.

It is estimated that any residual emissions remaining in 2040, in any case unrelated to direct emissions from power generation and indirect emissions from the sale of electricity and gas where all emissions are expected to be zero, will amount to less than 2.5 MtCO_{2eq} annually. In this case, to achieve the target of net zero emissions validated by the SBTi, from 2040 onward the Group will mitigate any impact by removing carbon equivalent volumes from the atmosphere, primarily by building a portfolio of carbon removal credits linked to high-quality, high-integrity nature-based and technology-based solutions with proven long-term durability, managing potential risks through portfolio diversification by technology and country.

In line with the **Group's commitment to a just transition**, action is being taken with regard to the requalification, retraining and self-learning of direct and indirect workers, the provision of support to supply chain companies to help business diversification and strengthen resilience, the creation of value for communities in terms of access to local job opportunities, and the facilitation of access to products and services for customers.

The Group is continuously attentive to people and its stakeholders, contributing to sustainable progress also through innovation and digitalization, which act as accelerators of growth.

(7) "Business to consumer" (B2C) clients in Italy and Iberia.

2024–2026 Strategic Plan

The new 2024–2026 Strategic Plan, unveiled on Capital Markets Day in November 2023, places environmental and financial sustainability as one of the three pillars of the new strategy, through which Enel contributes to climate action, the electrification of consumption and the energy transition, while pursuing value creation and strengthening the Group's creditworthiness.

For the 2024–2026 period, the Group has outlined an ambitious total gross investment plan of approximately 35.8 billion euros, strategically spread across different countries and regions with 49% destined for Italy, 25% to Spain, 19% to Latin America, and the remaining 7% to North America.

Regarding **renewables**, the Group has planned gross investments of approximately 12.1 billion euros between 2024 and 2026, and it specifically plans to invest in on-shore wind, solar, and battery storage (BESS). The Group's new approach to investment in renewables is based on three different business models:

- an **Ownership** business model, in which the Group holds a 100% stake, which will be applied mainly in Italy and Iberia;
- a **Partnership** business model, in which the Group holds a 50% stake (and less than 100%);
- a **Stewardship** business model, in which the Group holds a stake of 50% or less, which will continue to apply in the non-core countries of the Group.

Between 2024 and 2026, this new approach is expected to enable the Group to create about 13.4 GW of new renewable capacity in all countries and regions where it operates. In 2026, the Group expects its consolidated and managed renewable capacity to increase to approximately 73 GW from about 62 GW in 2023 (55.5 GW of consolidated capacity and 6.2 GW of managed capacity), with the share of consolidated and managed generation with zero emissions reaching around 86%, up from 75% in 2023.

In addition, regarding the **decarbonization process**, the plan is to gradually reduce investments in new carbon-intensive assets until they are completely finalized in 2025. Specifically, in 2024–2026, the Group plans to invest less

than 3% of gross investment in thermoelectric power generation, largely dedicated to maintaining existing plants, while investment in new plant development will be substantially limited to the conversion from coal to CCGT power at the Fusina power plant, which is scheduled for completion by 2024.

Regarding **grids**, the Group plans to invest around 18.6 billion euros over the 2024–2026 period. Grid investment is expected to focus on improvements in quality, resilience to the effects of climate change, and digitalization, as well as on new connections.

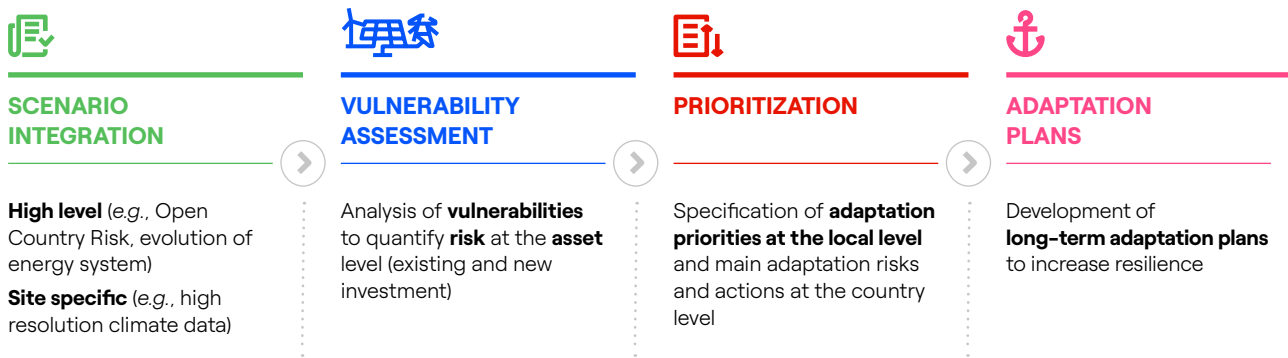
As for **customers**, the Group has planned gross investments of approximately 3 billion euros between 2024 and 2026 that, among other priorities, will also help promote the electrification of consumption, supporting customers in the decarbonization process.

More than 90% of the gross capital expenditure in 2024–2026 is in line with the United Nations Sustainable Development Goals (SDG), directly pursuing SDG 7 ("Affordable and clean energy"), 9 ("Industry, innovation and infrastructure") and 11 ("Sustainable cities and communities"), which are all related to SDG 13 ("Climate action"). The investments envisaged in the Group's Strategic Plan are in line with the decarbonization and greenhouse gas reduction targets, based on a specific methodology whereby investments made in renewables and retail power inherently fall under SDG 7, investments in the distribution network fall under SDG 9, and investments in Enel X are related to SDG 11. Therefore, the over 90% referred to above does not include investments in conventional generation (including investments in maintenance) and in retail gas. In addition, over 80% of the Group's investments in the 2024–2026 period will be aligned with the EU Taxonomy criteria, as they will make a substantial contribution to climate change mitigation.



For more information on the Group's strategy, see the "**Group Strategy and Risk Management**" section of the 2023 Integrated Annual Report.

Enel's resilience and adaptation to climate change



The application of long-term climate scenarios makes it possible to prepare adaptation plans for the Group's portfolio of assets and activities. Climate scenarios are developed by identifying the physical phenomena that are most relevant to each business (such as heat waves, extreme rainfall, fire risk, etc.) in order to produce analyses that provide not only high-level indications (such as country risk indices that can be compared with each other), which make it possible to study physical impacts at an individual site. This approach applies to both the existing portfolio and to new investments.

By assessing the vulnerability of assets, priority actions to increase resilience can be identified.




The Group implements solutions to climate change adaptation by taking a comprehensive approach, which involves assessing the potential impacts in order to properly target the measures required to improve the ability to respond to adverse events (Response Management) and to increase business resilience (Resiliency Measures), consequently reducing the risk of adverse events having a

negative impact in the future. Moreover, the expertise and tools developed to analyze the effects of climate change can be used to create value, for example by devising new business options aimed at offering solutions that facilitate the adaptation of communities and all stakeholders.

Adaptation solutions can include actions, policies and best practices implemented in the short term, as well as long-term decisions.

For new investments, in line with the general approach, action can also be taken early in the design and construction phase to reduce the impact of climate risks, for example by taking into account in the design phase climate scenarios and analyses of the vulnerability of assets to specific phenomena in order to implement resilient solutions.

The following table shows a high-level summary that represents the type of actions that Enel implements for proper management of adverse events and to increase resilience to weather phenomena and their evolution due to climate change.

Business Line	A. Resiliency Measures: Enhancement of asset resilience	B. Response Management: Management of adverse events
 ENEL GREEN POWER AND THERMAL GENERATION	<p>Existing assets</p> <ol style="list-style-type: none"> Guidelines for risk assessment and hydraulic technology design "Lessons learned feedback" processes from O&M towards E&C and BD <p>New constructions</p> <p>In addition to what has been done for existing assets:</p> <ol style="list-style-type: none"> Climate Change Risk Assessment (CCRA) included in environmental impact documents (pilot) 	<p>Existing assets</p> <ol style="list-style-type: none"> Incident and critical event management Site-specific emergency management plans and procedures Specific tools for predicting imminent extreme events
 ENEL GRIDS	<p>Existing assets and new constructions</p> <ol style="list-style-type: none"> Guidelines for defining network resilience enhancement plans (e.g., the e-distribuzione "Network Resilience Enhancement Plan") Strategies and guidelines on risk prevention actions on the distribution network The Resilience Plan in Italy and Network Strength in Colombia 	<p>Existing assets</p> <ol style="list-style-type: none"> Strategies and guidelines on readiness, response, and recovery actions on the distribution network General guidelines for emergency and critical event management Risk prevention and preparation measures in the event of fire on electrical installations (lines, transformers, etc.)
 ENEL X GLOBAL RETAIL	<p>Existing assets</p> <ol style="list-style-type: none"> Preliminary analysis of the impact of medium to long-term climate change 	<p>Existing assets</p> <ol style="list-style-type: none"> Enel X Critical Event Management

Enel also completed a project dedicated to compiling a catalog of practical interventions aimed at strengthening the resilience of assets and their capacity to respond to the possible effects of climate change. It includes targeted actions for each of the climate events relevant to the countries and regions of interest to the Group, differentiated based on the different technologies of the assets held in these areas.

This catalog, which is maintained and updated cyclically based on emerging needs and refined analyses, includes more than 100 possible actions, including:

- weather alerting (which includes the use of various tools to monitor and manage assets and natural resources);
- automation (for example, on medium voltage networks to reduce the impact of faults on customers in terms of SAIDI and SAIFI);

- structural reinforcement of the entire asset park, focusing in particular on critical components;
- continuous training of personnel;
- maintenance and care of the vegetation and environment immediately surrounding the asset.

The catalog allows the choice, based on a cost-benefit analysis, of the most cost-effective action to take based on the anticipated risk scenarios in each specific situation.



For more information on the adaptation and resilience actions carried out in each Business Line, see the "**Group Strategy and Risk Management**" section of the 2023 Integrated Annual Report.

Risks and opportunities connected with climate change

3-3 | 201-2 | TCFD: Strategy and Risk Management

The process of defining the Group's strategy is accompanied by a careful analysis of the risks and opportunities connected to it, also including the aspects related to climate change. Every year, before the Board of Directors examines the Strategic Plan, the Control and Risk Committee is presented with a quantitative analysis of the risks and opportunities related to the Group's strategic positioning, which includes aspects related to the climate, such as regulatory factors and weather and climate phenomena.

In order to facilitate the proper identification and management of risks and opportunities related to climate change, a **Group policy** was published in 2021 that outlines common guidelines for assessing the risks and opportunities arising from climate change. The "Climate change risks and opportunities" policy defines a shared approach for the integration of climate change and energy transition issues into the Group's processes and activities, thus informing industrial and strategic choices to improve business resilience and long-term sustainable value creation, consistent with the adaptation and mitigation strategy. The main steps considered in the policy are as follows:

- **prioritizing phenomena and scenario analysis.** These activities include the identification of physical and transition phenomena relevant to the Group and the consequent development of scenarios to be considered and developed through analysis and processing of data from internal and external sources. Functions can be developed for the phenomena identified that link the scenarios (e.g., data on the change in renewables) to business operations (e.g., the change in potential output);
- **impact assessment.** Includes all analyses and activities necessary to quantify the effects at the operational,

economic and financial levels, depending on the processes into which these are integrated (e.g., design of new builds or operational performance appraisal, etc.);

- **operational and strategic actions.** Information from previous activities is integrated into processes, informing Group decisions and business activities. Examples of activities and processes that benefit are capital allocation, e.g., for evaluating investments on existing assets or new projects; defining resilience plans, risk management and financing activities and engineering and business development activities.

In order to identify the main types of risk and opportunity and their impact on the business in a structured manner consistent with TCFD recommendations and the latest climate change reporting standards, Enel has adopted a **framework** that clearly shows the main relationships between scenario variables and types of risk and opportunity, specifying the strategic and operational approaches to managing the same, also taking into account mitigation and adaptation measures. Two main macro-categories of risks/opportunities are identified:

- those connected with developments in physical variables;
- those connected to the evolution of the transition scenarios.

The framework described is constructed with a view to overall consistency, making it possible to analyze and evaluate the impact of the physical (e.g., climate change) and transition (e.g., the energy context) phenomena according to solid, alternative scenarios created using a quantitative and model-based approach in consultation with both internal stakeholders and authoritative external resources.

Framework on key risks and opportunities

Scenario phenomena	Time horizon	Risk and opportunity driver	Description	Management approach
Transition	From short term (1-3 years)	Policy & Regulation	Risk/opportunity: policies on CO ₂ prices and emissions, energy transition policies and financial instruments, revision of market design and permitting procedures, and resilience regulation.	The Group is minimizing its exposure to risks through progressive decarbonization and the focus of the business on renewables, grids and customers. The business model is designed to maximize the benefits of the Group's integrated position in the core countries and leveraging partnership and stewardship activities, which enables to exploit the opportunities connected with the energy transition. The Group is also actively contributing to the formation of public policies through its advocacy efforts. These activities are conducted within platforms for dialogue with stakeholders that explore ambitious national decarbonization scenarios in the various countries in which Enel operates.
Transition	From medium term (2027-2034)	Market	Risk/opportunity: changes in the prices of commodities, raw materials and energy , evolution of energy mix , changes in retail consumption , changes in competitive environment .	The Group is maximizing opportunities by adopting a strategy founded on the energy transition, focusing on the electrification of energy consumption and the development of renewables and a geographical positioning in countries in which it has an integrated presence . Considering alternative transition scenarios, the Group assesses the impact of different commodity price trends, changes in the share of renewables in the generation mix and the electrification of final consumption.
Transition	From medium term (2027-2034)	Product & Services	Risk/opportunity: increase/decrease in margins and greater scope for investment as a consequence of the transition in terms of greater penetration of electrical mobility, distributed generation and new technologies for the direct and indirect electrification of final consumption.	The Group is maximizing opportunities thanks to its strong positioning in new businesses and "beyond commodity" services . In addition, considering alternative transition scenarios, the Group assesses the impact of different trends in the electrification of consumption.
	From medium term (2027-2034)	Technology		The Group is maximizing opportunities thanks to its strong strategic positioning in new businesses and grids at the global level. With the penetration of direct and indirect electrification technologies, considering alternative scenarios, the Group assesses the potential opportunities for scaling existing and potential businesses and for the development of new solutions linked to digitalization and resilience of power grids.
Acute physical	From short term (1-3 years)	Extreme events	Risk: especially extreme weather/ climate events , which can damage assets and interrupt operations .	The Group adopts best practices to manage the restoration of service as quickly as possible . The Group also works to implement investments in resilience (e.g., the Italian case). With regard to risk assessment in insurance, the Group has a loss prevention program for property risk that also assesses the main exposures to natural events, supported by preventive maintenance activities and internal risk management policies. Looking forward, the assessments will also include the potential impacts of long-term trends in the most significant climate variables.
Chronic physical	Medium (2027-2034) and long term (2035-2050)	Market	Risk/opportunity: increase or decrease in electricity demand under influence of temperature, whose variations can impact the business. Increase or decrease in renewables output , which may be affected by structural changes in resource availability.	The Group's geographical and technological diversification means that the impact of changes (positive and negative) in a single variable is mitigated at the global level. In order to ensure that operations always take account of weather and climate phenomena, the Group adopts a range of practices such as, for example, weather forecasting, real-time monitoring of generation plants and long-term climate scenarios to identify any chronic changes in renewable source availability.

The framework outlined above also highlights the relationships that link the physical and transition scenarios with the potential impact on the Group's business. These effects can be assessed from the perspective of three time horizons: short to medium term (1-3 years), in which sensitivity analyses based on the 2024-2026 Strategic Plan pre-

sent to the markets in 2023 can be performed; medium term (2027-2034), in which it is possible to assess the effects of the energy transition; and long term (2035-2050), in which chronic structural changes in the climate should begin to emerge.

Assessment of risks related to the energy transition

To quantify the risks and opportunities arising from the energy transition in the long term, two transition scenarios, described in the paragraph on "Enel's energy transition scenarios" have been considered.

In the Enel (Reference) scenario, the progressive electrification of final energy consumption – particularly of transportation and the residential sector – leads to a considerable increase in electricity consumption and thus growth in the demand for electricity. This dynamic reduces the risk arising from the gradual increase of renewables in the energy mix, which could lead to a reduction in the wholesale electricity price; moreover, market design revisions that favor long-term remuneration would have a positive impact in terms of the greater visibility of returns in the medium and long term.

The effects of the Slower Transition and Accelerated Transition scenarios on the variables most likely to impact the business have therefore been identified, in particular **electricity demand**, influenced by the dynamics of electrification of consumption, and thus penetration of electric technologies and the electricity generation mix.

With regard to the **electrification of consumption**, the **Slower Transition scenario** predicts lower penetration rates of the most efficient electric technologies, particularly electric cars and heat pumps, causing a decrease in electric demand compared to the Reference scenario, which is estimated to result in moderate impacts on the Retail commodity business & beyond. At the same time, lower electricity demand results in less space to develop renewable capacity, which has an impact on the gener-













ation business; this is partially offset by higher electricity prices compared to a scenario with more renewables.

As regards the Accelerated Transition scenario, a more rapid reduction in the cost of **green hydrogen generation** technologies is assumed. This results in increased penetration of this energy carrier, at the expense of blue and gray hydrogen, with a consequent additive effect on domestic electricity demand and renewable capacity installations compared to the Reference scenario.

All scenarios, albeit to a greater extent the Reference and Accelerated Transition scenarios, envisage an **increasingly important role for grids**: indeed, a significant increase is expected in distributed generation and in other resources, such as storage systems, greater penetration of electric mobility with the relative charging infrastructures, as well as the increasing rate of the electrification of consumption. This context will involve a decentralization of the extraction/feed-in points, an increase in electric demand and the average requested power, a considerable variation in energy flows, which will require dynamic and flexible grid management. The Group therefore expects that in this scenario incremental investments will be necessary to guarantee the connections and suitable levels of quality and resilience, by promoting the adoption of innovative operating models. These investments must be accompanied by coherent policy and regulation scenarios to guarantee suitable economic returns for the Enel Grids Business Line.

 Upside (Accelerated Transition vs Reference)

 Downside (Slower Transition vs Reference)

Scenario phenomena	Risk/opportunity category	Description	Time horizon	Description of impact	GBL involved	Scope	Quantification - Impact type	Quantification - range					
								Upside/Downside	<€100 mil	€100-300 mil	>€300 mil		
Transition	Market	Risk/opportunity: more/less scope for investment in new renewables capacity and power price changes corresponding to different degrees of renewables penetration	Medium term ⁽¹⁾	Two alternative transition scenarios to the <i>Reference</i> scenario are considered, with respect to which the Group has evaluated the impact of different degrees of renewables penetration on the reference power price and additional capacity	Global Generation Global Enel X Retail  	Enel Group	EBITDA/year	Upside					
								Downside					Adoption of measures to increase Customer Base in order to compensate for the negative impact on margins
Transition	Market	Risk/opportunity: smaller/larger margins depending on degree of electrification of consumption	Medium term ⁽¹⁾	Considering two alternative transition scenarios to the <i>Reference</i> scenario, the Group has evaluated the effects of a change in average unit consumption and electricity demand as a result of greater/lesser electrification of energy consumption	Global Enel X Retail Global Grids  	Enel Group	EBITDA/year	Upside					
								Downside					Adoption of measures to increase Customer Base in order to compensate for the negative impact on margins
Transition	Product and Services	Risk/opportunity: larger/smaller margins and more/less scope for investment depending on the effects of the transition in terms of penetration of new technologies and electric transport	Medium term ⁽¹⁾	Considering two alternative transition scenarios to the <i>Reference</i> scenario, the Group has evaluated the effects of different trends in the electrification of transport and the electrification of domestic consumption	Global Enel X Retail  	Enel Group	EBITDA/year	Upside					
								Downside					



(1) 2030 benchmark.

Assessment of risks arising from physical phenomena

Chronic phenomena

The initial scenario analysis has shown that **chronic structural changes will take place in the recent trends of physical variables, which will be appreciable in the long term.** However, in order to obtain an indicative estimate of the potential impacts and to anticipate the possibility of the early onset of chronic effects, **it is possible to test sen-**

sitivity of the Industrial Plan to the factors potentially affected by the physical scenario, taking into account historical weather variability and expected long-term climate changes. The existing Industrial Plan was drafted based on the information contained in the average scenarios for chronic phenomena, which allowed for consideration of the possible effects of trends in climatic variables. The table below shows the results of this analysis.

Scenario phenomena	Risk/opportunity category	Description	Time horizon	Description of impact	GBL involved	Scope	Quantification - Impact type	Upside/Downside	Quantification - range		
									<€100 mil	€100-300 mil	>€300 mil
Chronic physical	Market	Risk/opportunity: increased or decreased electricity demand	Medium/long term	Electricity demand is also influenced by temperature, fluctuations in which can impact the business. Although structural changes should not emerge in the short term, sensitivity analyses of variations in electricity demand are used, in line with the climate scenarios analyzed	Global Generation Global Grids 	Enel Group	EBITDA/year	Upside		●	
								Downside			●
Chronic physical	Market	Risk/opportunity: increase or decrease in renewable generation	Medium/long term	Renewable generation is influenced by the availability of resources, fluctuations in which can impact the business. Although structural changes should not emerge in the short term, the sensitivity of the Group's results was assessed using sensitivity analyses considering historical meteorological volatility and variations in generation potential in the different climate scenarios	Global Generation 	Enel Group	EBITDA/year	Upside		●	
								Downside			●

Acute phenomena

In the various cases, the acute physical phenomena such as wind storms, floods, heat waves, severe cold, etc., demonstrate a high level of intensity yet do not have a very high occurrence frequency in the short term, but, considering the medium and long-term climatic scenarios, this will increase considerably in the future.

For the above reasons, the Group currently finds itself **having to manage risks arising from extreme events in the short term.**

The analysis of **probability, vulnerability and exposure** to acute events provides the basis for assessing the risks arising from extreme events. From this point of view, the Group differentiates the risk analysis with respect to the climate change scenarios, depending on the specific nature of the various associated time periods. The following table summarizes the scheme adopted for the evaluation of impacts deriving from acute physical phenomena.

Time horizon	Hazards	Vulnerability	Exposure
Short term	Hazard maps based on historical data and meteorological models	Vulnerability, being related to the type of extreme event, to the specifics of the damage type and to the technical requirements of the technology under consideration, Vulnerability is essentially independent of time horizons	Group values in the short term
Medium and long term	Hazard maps and specific studies for different IPCC RCP climate scenarios		Long-term evolution of Group values

Over the short term (1–3 years), the Group will implement actions targeted at reducing the impacts of extreme catastrophic events on the business. It is possible to distinguish two main types of actions: **putting in place effective insurance cover** and the various **climate change adaptation** activities related to preventing damage that could result from extreme events.

With regard to the **impact of acute physical events**, the Enel Group has a well-diversified portfolio in terms of technologies, geographic distribution, and asset size, and consequently, the portfolio's exposure to natural risks is

also diversified. The Group implements various risk mitigation measures which, as will be described below, include both insurance coverage and other managerial and operational actions aimed at further reducing the Company's risk profile.

Indeed, **empirical evidence shows negligible repercussions of such risks**, as demonstrated by data for the last 5 years. Considering the most relevant events, defined as those with a gross impact >10 million euros, the cumulative value of the gross impact amounts to ~130 million euros, which represents less than 0.06% of the Group's insured values as at 2023, or ~220 billion euros.

Institutional collaboration with regard to climate risk analysis: **Fondazione Centro Studi Enel (Enel Foundation) and SACE**

Enel Foundation, in collaboration with SACE, an Italian insurance-financial group, developed an evolutionary **Country Risk model** which enables more timely assessments and more effective investments for sustainable development for all, in addition to highlighting and preventing possible losses arising from non-payment and political risks related to the internationalization of companies.

The model integrates traditional methodologies for ranking country risk, highlighting the importance of ensuring an **equitable distribution of wealth**, combating **climate change** and accelerating the **energy transition** as prerequisites for ensuring prosperity in the new normal.

In particular, summary indicators defining the well-being, climate risk and energy transition scenarios for each country have been included in the "SACE Risk Map".

Further details can be found at the following link: <https://www.sace.it/en/appendix-enel-foundation>.



For more information on risk assessments arising from physical phenomena and transition, see the "**Group Strategy and Risk Management**" section of the 2023 Integrated Annual Report.

Enel's performance in tackling climate change

| 3-3 | 305-1 | 305-2 | 305-3 | 305-4 | 305-5 | 305-6 | TCFD: Metrics & Targets |

Methodology for calculating greenhouse gas emissions

The current **internal policy**, “**Definition and method of calculating GHG emissions**”, defines the common framework for the collection and analysis of GHG emissions data and performance, taking into account the internal and external targets and potential benefits to the Group and to Enel stakeholders. The procedure entails compiling and harmonizing definitions and methods, adopted internally and based on international standards, for quantifying the impact of Enel Group's GHG emissions, outlining the business processes aimed at measuring the various related aspects.

Primary operational and GHG data are collected through the Group's environmental database on an annual basis, with the exception of certain specific data which are collected more frequently. According to technological and geographical criteria, data is collected directly from the different organizational levels (site or country level, depending on the source) and is subject to formal internal checks and evaluation for consistency before being validated by the Business Lines and at the consolidated level.

In 2023, Enel launched an **action plan** to strengthen the GHG emissions accountability and reporting process that, among other priorities, aims to: review and update the methodology for calculating specific existing GHG sources; improve existing processes and increase efficiency and alignment that disclosure standards; update existing digital systems to collect GHG data. Accordingly, the Group has already implemented the following methodological changes that affect the data for the 2021-2023 period, while further actions will be developed during 2024:

- for the calculation of **Scope 2** and **Scope 3 – category 3D** emissions (generation of purchased electricity that is sold to end users), the country emission factors of

the power system (for both location-based and market-based models) have been updated. Enel now relies on data from national authorities for its core countries (Italy, Spain, Chile, Colombia, Peru, Brazil and the United States), while continuing to use data from third-party providers for all other countries;

- for the calculation of **Scope 2** emissions relating to electricity consumption in power distribution business, it has been decided to consider these emissions as part of the calculation of scope 2 emissions from technical grid losses;
- for the calculation of **Scope 3 – category 1** emissions (purchase of goods and services), primary data and method calculation on specific works have been updated;
- for the calculation of **Scope 3 – category 11** emissions (use of sold products), Enel updated the methodology to align the calorific value considered for the natural gas volume sold to end customers with the corresponding IPCC factor.

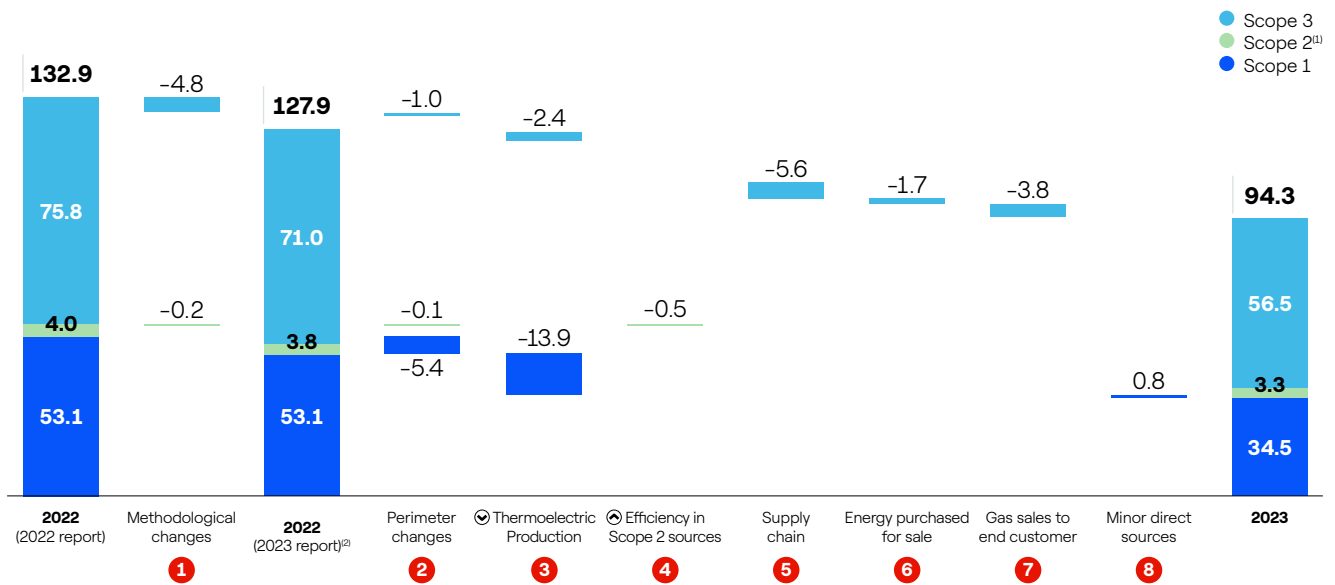
GHG inventory statement has been verified by DNV GL, one of the world's leading certification bodies, with a reasonable level of assurance for Scope 1 and Scope 2 emissions and a limited level of assurance for Scope 3 emissions included in the field of application of the inventory. The audit was conducted according to Standard ISO 14064-3 for the compliance of greenhouse gas (GHG) inventories with the WBCSD/WRI Corporate Accounting and Reporting Standard (GHG Protocol).



For more details concerning Enel's carbon footprint, please refer to the **2023 GHG inventory**.

Greenhouse gas emissions trends in 2023

GREENHOUSE GAS EMISSIONS TRENDS IN 2023 (MtCO_{2eq})



2023 progress (vs 2022)

- 1 Methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".
- 2 Disposal of thermoelectric and renewable assets in Russia and power distribution companies in Latin America in 2022.
- 3 Reduction of thermoelectric production (coal and CCGT) in Italy, Iberia and Latin America (also influenced by the disposal of thermoelectric assets in Argentina in 2023).
- 4 Reduction of electricity consumption in proprietary assets and reduction of technical losses in power grids operated by Enel in some countries.
- 5 Reduction of ordered expenses, higher weight of purchase of materials with a lower carbon footprint and reduction of the ratio between emissions and ordered expenses.
- 6 Reduction of the gap between electricity sales to end customers and own production in countries in which the Group has an integrated position and improvement of the national emission factors in some of these countries.
- 7 Reduction of the gas volume sold to end customers.
- 8 Increase of some direct emissions sources, mainly those related to auxiliary services (electro generators) in power grids.

(1) Scope 2 figures refer to the location based model.

(2) 2022 baseline restated for the elaboration of the 2023 Sustainability Report.

In 2023, total absolute direct and indirect (Scope 1, 2, and 3) emissions totaled 94,321,654 tCO_{2eq}, reaching the lowest rate ever and breaching the increasing trend experienced in 2021 and 2022 following the global energy crisis. Specifically, total emissions have been reduced by 26.3% compared to 2022⁽⁸⁾.

This was mainly due to an overall improvement in the main operational performance metrics (also influenced by the various M&A transactions in 2022 and 2023), which contributed to reduce direct and indirect emissions along the entire value chain, by:

- reducing capacity and thermal power generation (also influenced by the disposal of thermal power assets in Russia and Chile in 2022 and in Argentina in 2023) and increasing capacity and renewable power generation;
- reducing the gap between electricity sales in the retail market and own production in certain countries;
- reducing natural gas sales in the retail market, influenced also by the sale of assets in Romania (although with a limited impact due to its completion in October 2023);
- reducing ordered expenditure in 2023 and improving the ratio of GHG emissions to supply chain expenses.

(8) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".

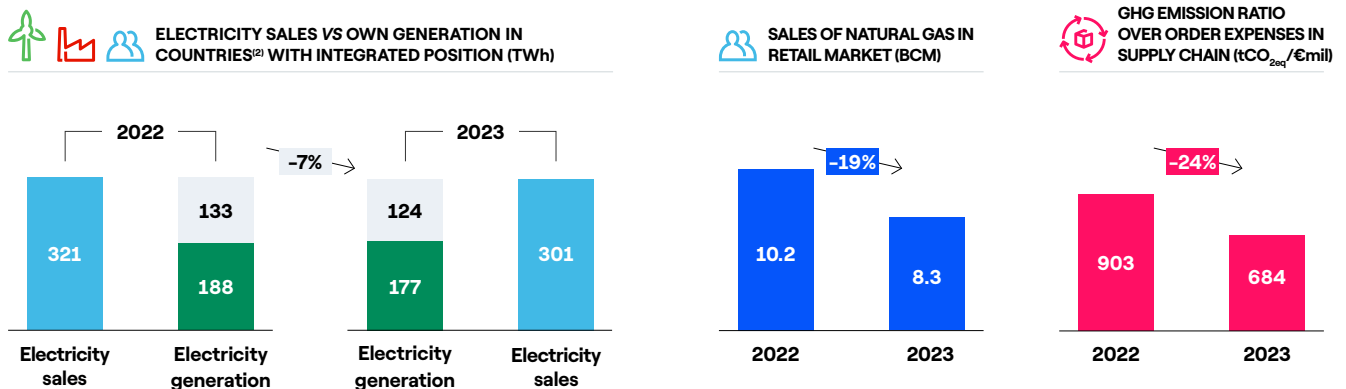
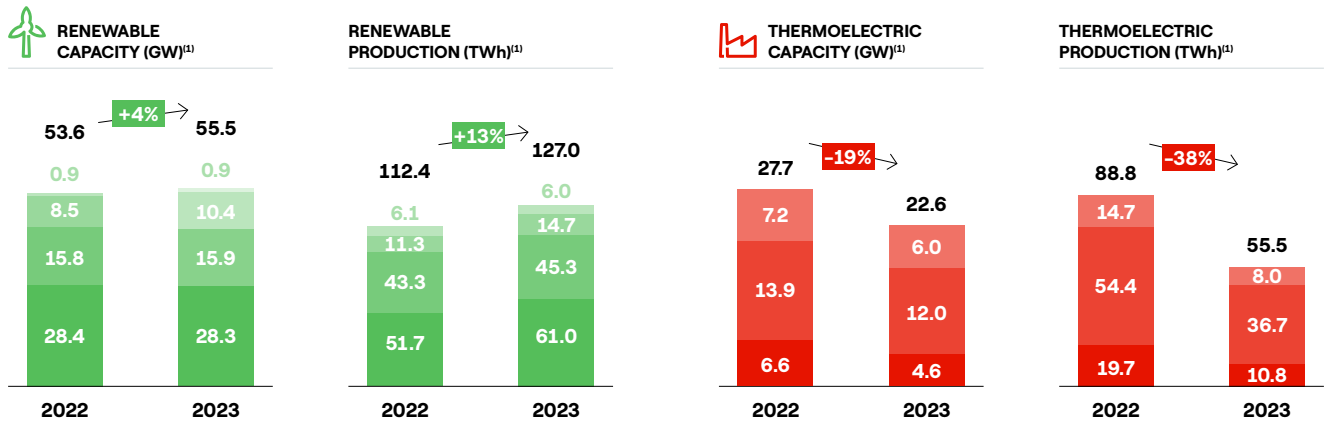
Moreover, the digitalization and automation of electricity grids have contributed to reduce grid losses and enable the development of renewable sources, playing a key role

in the Group's decarbonization performance, as well as in the decarbonization of the energy systems in which it operates.

OPERATIONAL METRICS WITH THE HIGHEST INFLUENCE ON ABSOLUTE GHG EMISSIONS (SCOPE 1, 2, 3)

● Geothermal & biomass
● Solar
● Wind
● Hydro

● Oil&Gas
● CCGT
● Coal



● Gap between electricity sales and own generation, relevant for Scope 3 (category 3D) calculation

(1) Consolidated capacity and production. They also include operational data from assets in operation in 2022 and 2023 until their disposal date. In addition, Enel produced 24.9 TWh from nuclear in 2023 (with respect to 26.6 TWh in 2022).
 (2) Italy, Spain, Brazil, Chile, Colombia, Argentina, Peru and Romania (until its disposal).

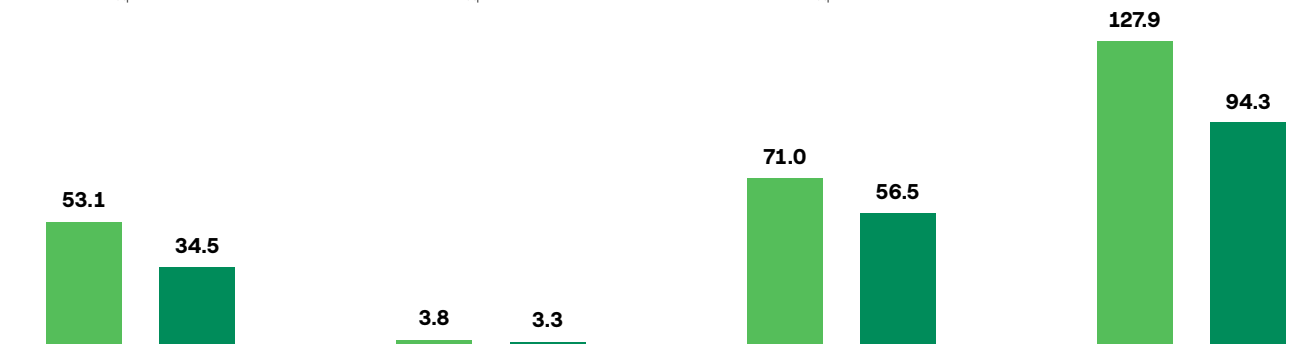


Absolute direct GHG Scope 1 emissions (MtCO_{2eq})

Absolute indirect GHG Scope 2 location-based emissions (MtCO_{2eq})⁽²⁾

Absolute indirect Scope 3 GHG emissions (MtCO_{2eq})

Total Absolute GHG emissions (location-based – MtCO_{2eq})⁽³⁾





	GENERATION	NETWORKS	CUSTOMERS	OTHER
Direct Scope 1 GHG Emissions (MtCO_{2eq})	<p>● Generation from thermal sources ● Other⁽⁴⁾</p> <p>52.1 32.7</p> <p>0.5 0.5</p>	<p>● Auxiliary motors in grids ● SF₆ losses in grids</p> <p>0.2 1.0 0.1 0.1</p>		<p>REAL ESTATE</p> <p>● Offices ● Company fleet of vehicles</p> <p>0.01 0.01 0.08 0.08</p>
Indirect Scope 2 GHG emissions (MtCO_{2eq}) (location-based)	<p>● Electricity consumed \ from the grid</p> <p>0.7 0.6</p>	<p>● Technical losses in the Enel grid</p> <p>3.1 2.7</p>		<p>● Electricity consumed from the grid in offices</p> <p>0.03 0.03</p>
Indirect Scope 3 GHG emissions (MtCO_{2eq})	<p>● Fuels (upstream)⁽⁵⁾</p> <p>10.3 6.9</p>		<p>● Gas sales to the end customer ● Electricity purchased for sale to the end customer</p> <p>20.6 16.8 25.7 24.0</p>	<p>● Supply chain (including all business activities) ● Transport of other raw materials and waste in various business activities</p> <p>14.4 8.8 0.01 0.01</p>

- GHG source considered in SBTi target on Scope 1 GHG emissions Intensity relating to Power Generation.
- GHG source considered in the SBTi target on the Scope 1 and 3 emissions Intensity relating to Integrated Power.
- GHG source considered in the SBTi target on Absolute Scope 3 GHG emissions relating to Gas Retail.
- GHG source considered in SBTi target on Absolute additional GHG emissions Scope 1, 2 and 3.
- GHG source excluded from SBTi targets.

(1) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".
 (2) The value according to the market-based methodology is 5.1 MtCO_{2eq} in 2022 and 4.5 MtCO_{2eq} in 2023.
 (3) The value according to the market-based methodology is 129.2 MtCO_{2eq} in 2022 and 95.6 MtCO_{2eq} in 2023.
 (4) Other: auxiliary engines in nuclear and renewable installations; losses or leaks of NF₃, SF₆, HFC and CH₄; biogenic CH₄ emissions from hydroelectric reservoirs; transport of fuels on ships under its operational control.
 (5) Includes extraction and transport of coal, gas and fuel oil related to generation activities; as well as the extraction and transport of gas sold to the end customer in the retail market.

SCOPE 1 EMISSIONS

ACTIVITY	DESCRIPTION OF GHG SOURCE	TOTAL (tCO _{2eq})			2023 – COMBUSTION (tCO _{2eq})			2023 – FUGITIVE EMISSIONS (tCO _{2eq})				
		2023	2022	%	CO ₂	CH ₄	N ₂ O	SF ₆	HFC _s	NF ₃	NON-BIO CH ₄	BIO CH ₄
 GENERATION	<ul style="list-style-type: none"> Thermoelectric generation activities, including gas and coal fired power plants, while also non CO₂ emissions from biomass 	32,744,581	52,112,888	-37.2%	32,624,745	43,029	76,807	-	-	-	-	-
	<ul style="list-style-type: none"> Auxiliary engines in nuclear and renewable power plants 	12,835	19,077	-32.7%	12,796	14	26	-	-	-	-	-
	<ul style="list-style-type: none"> Transportation of fuels (LNG and coal) and subproducts (ashes and gravel) on vessels under own operational control 	151,498	148,917	1.7%	149,741	17	1,739	-	-	-	-	-
	<ul style="list-style-type: none"> Fugitive CH₄ emissions in gas-fired thermal power plants 	2,167	6,754	-67.9%	-	-	-	-	-	-	2,167	-
	<ul style="list-style-type: none"> SF₆ losses in insulation systems of power plants 	45,310	37,743	20.1%	-	-	-	45,310	-	-	-	-
	<ul style="list-style-type: none"> Fugitive HFCs emissions in thermoelectric and hydropower plants, and PV manufacturing sites 	1,427	4,638	-69.2%	-	-	-	-	1,427	-	-	-
	<ul style="list-style-type: none"> Fugitive NF₃ emissions in photovoltaic panels manufacturing 	-	4	-100.0%	-	-	-	-	-	-	-	-
	<ul style="list-style-type: none"> Biogenic CH₄ emissions from hydroelectric basins 	328,093	323,598	1.4%	-	-	-	-	-	-	-	328,093
 NETWORKS	<ul style="list-style-type: none"> Auxiliary engines in distribution assets 	1,032,588	224,942	359.0%	1,029,180	1,178	2,230	-	-	-	-	-
	<ul style="list-style-type: none"> SF₆ losses in insulating systems for power distribution activities 	101,429	105,173	-3.6%	-	-	-	101,429	-	-	-	-
 REAL ESTATE	<ul style="list-style-type: none"> Heating systems and canteens in offices (diesel and natural gas), including all properties in all of the Group's Business Lines and offices 	6,177	6,385	-3.3%	6,170	3	4	-	-	-	-	-
	<ul style="list-style-type: none"> Company fleet of vehicles (diesel and gasoline) 	80,772	76,550	5.5%	78,871	351	1,551	-	-	-	-	-
	<ul style="list-style-type: none"> Fugitive HFC emissions in offices 	3,680	900	309.0%	-	-	-	-	3,680	-	-	-
TOTAL		34,510,557	53,067,569	-34.9%	33,901,503	44,592	82,356	146,739	5,106	-	2,167	328,093

- GHG source considered in SBTi target on Scope 1 GHG emissions Intensity relating to Power Generation.
- GHG source considered in the SBTi target on the Scope 1 and 3 GHG emissions Intensity relating to Integrated Power.
- GHG source considered in SBTi target on absolute additional GHG emissions Scope 1, 2 and 3.
- GHG source excluded from SBTi targets.

In 2023, Scope 1 GHG emissions were 34,510,557 tCO_{2eq} accounting for 36.6% of total GHG emissions and resulting in a significant reduction compared to 2022 (35.0% reduction).

The share of Scope 1 GHG emissions (including CO₂, CH₄ and N₂O) relating to the combustion of fuels for power generation accounted for more than 94.9% of the total Scope 1 value. These emissions, amounting to 32,744,581 tCO_{2eq}, were reduced by 37.2% compared to 2022, thanks to a 38% reduction in thermal power generation resulting from lower coal-fired and CCGT generation in Italy, Iberia and Chile and from the sale of thermal power plants in Russia in 2022 and Argentina in 2023. In addition, power generation from renewables has increased by 13% since 2022 (with significant increases in hydroelectric and solar

power generation, 18% and 29%, respectively), contributing to displace power generation from fossil fuels.

The percentage of emissions subject to local regulatory systems was 83.0%, broken down as follows:



- 74.1% of total Scope 1 emissions related to power plants in the EU-ETS system in Italy and Spain;
- 8.9% of total Scope 1 emissions related to power plants under the green tax system in Chile (Sistema de Impuestos Verdes).

Other Scope 1 emissions (including those from auxiliary power plant services and distribution sites, fugitive emissions, vehicle fleet, buildings, and fuel transport in proprietary vessels) amounted to 1,765,976 tCO_{2eq} combined, accounting for 5.1% of total Scope 1 emissions.

Regarding biomass and biogas, direct emissions of CH₄ and N₂O related to combustion for power generation, amounting to 28,631 tCO_{2eq} in 2023, are part of the Scope

1 calculation, while the corresponding biogenic CO₂ emissions, amounting to 96,277 tCO₂, are reported separately in line with the GHG Protocol guidelines.

SCOPE 2 EMISSIONS

ACTIVITY	DESCRIPTION OF GHG SOURCE	LOCATION-BASED			MARKET-BASED		
		2023	2022 ⁽¹⁾	%	2023	2022 ⁽¹⁾	%
 GENERATION AND OTHER	<ul style="list-style-type: none"> Electricity consumption from the grid in power plants, including hydro pumped-storage power plants 	568,045	656,313	-13.4%	797,733	867,282	-8.0%
	<ul style="list-style-type: none"> Electricity consumption from the grid at port terminals in Spain, PV production site in Italy (3Sun) and non-operational mining site in Italy (Santa Barbara) 	6,624	3,975	66.7%	1,433	1,630	-12.1%
 NETWORKS	<ul style="list-style-type: none"> GHG emissions associated with technical losses from the grid 	2,675,141	3,122,314	-14.3%	3,698,260	4,205,610	-12.1%
REAL ESTATE	<ul style="list-style-type: none"> Electricity consumption in buildings and offices 	27,865	34,412	-19.0%	8,735	25,684	-66.0%
TOTAL FROM ELECTRICITY CONSUMPTION		602,534	694,699	-13.3%	807,901	894,596	-9.7%
TOTAL FROM TECHNICAL LOSSES FROM THE GRID		2,675,141	3,122,314	-14.3%	3,698,260	4,205,610	-12.1%
TOTAL SCOPE 2		3,277,674	3,817,013	-14.1%	4,506,161	5,100,206	-11.6%

● GHG source considered in SBTi target on absolute additional GHG emissions Scope 1, 2 and 3.

(1) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".

In 2023, Scope 2 GHG emissions amounted to 3,277,674 tCO_{2eq} according to a location-based approach, accounting for 3.5% of total GHG emissions, while being 14.1% less than in 2022⁽⁹⁾. When considering the market-based model, they instead amount to 4,506,161 tCO_{2eq}. The two sources related to Scope 2 emissions are lower than in 2022. Specifically:




- **Scope 2 emissions from electricity consumed by the Group** decreased by 13.3% as a result of an 8% reduction of electricity consumption in power plants and build-

ings, as well as improved local emission factors in some countries where the Group operates, reaching 602,534 tCO_{2eq};

- **Scope 2 emissions from technical grid losses** decreased by 14.3%, as consequence of the technical losses reduction in most countries where electricity is distributed, supported also by the improvement of some local emission factors, reaching a value of 2,675,141 tCO_{2eq}.

(9) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".

SCOPE 3 EMISSIONS

ACTIVITY	DESCRIPTION OF GHG SOURCE	TOTAL (tCO _{2eq})		%
		2023	2022 ⁽¹⁾	
UPSTREAM SCOPE 3 EMISSIONS				
ALL	● Category 1 – Purchase of goods and services	8,815,466	14,411,116	-38.8%
 GENERATION AND OTHER	Category 3 – Fuels and energy-related activities not included in Scope 1 and 2: ● Category 3A – Upstream emissions of purchased coal ⁽²⁾	1,028,425	1,882,384	-45.4%
	● Category 3A – Upstream emissions of purchased natural gas ⁽³⁾	5,890,020	8,419,124	-30.0%
	● Category 3A – Upstream emissions of purchased fuel oil and biomass ⁽⁴⁾	5,151	5,934	-13.2%
 MARKET	● Category 3D – Generation of electricity purchased from third parties and sold to end customers ⁽¹⁾	23,995,410	25,673,107	-6.5%
ALL	● Category 4 – Upstream transport and distribution	9,352	9,842	-5.0%
DOWNSTREAM SCOPE 3 EMISSIONS				
 MARKET	● Category 11 – Use of sold products: Emissions from the use of gas sold by end customers ⁽¹⁾	16,789,600	20,633,606	-18.6%
Total		56,533,423	71,035,113	-20.4%

- GHG source considered in the SBTi target on the Scope 1 and 3 GHG emissions Intensity relating to Integrated Power.
- GHG source considered in the SBTi target on Absolute Scope 3 GHG emissions relating to Gas Retail.
- GHG source considered in SBTi target on absolute additional GHG emissions Scope 1, 2 and 3.
- GHG source excluded from SBTi targets.

- (1) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".
- (2) Includes the activities of coal mining and transport by ship by third parties, and also the transport of ash by ship by third parties.
- (3) Includes the extraction and transportation of natural gas for the electricity generation and also for sale to the end customer.
- (4) Includes road transport activities of purchased fuel oil and biomass.

In 2023, Scope 3 GHG emissions amounted to 56,533,423

tCO_{2eq}, accounting for 59.9% of total GHG emissions and resulting in a significant reduction of 20.4% compared to 2022⁽¹⁰⁾.

There has been a significant reduction in all Scope 3 sources, in particular:

- indirect GHG emissions from the **supply chain** (category 1) amounted to 8,815,466 tCO_{2eq}, 38.8% lower than in 2022⁽⁹⁾, due to a reduction in the absolute amount of spending on orders, the purchase of materials with a lower carbon footprint, and a 23% reduction in the ratio of emissions per unit of spending (from 903 tCO_{2eq}/€mil in 2022 to 684 tCO_{2eq}/€mil in 2023);
- indirect GHG emissions from **upstream coal** (category 3A), including mining and transport by sea (including ash), amounted to 1,028,425 tCO_{2eq}, a decrease of 45.4% following a reduction of more than 45% in coal-fired power generation (from 19.7 TWh in 2022 to 10.8 TWh in 2023);
- Indirect GHG emissions from **upstream gas** (category 3A), which include the extraction and transportation

of natural gas consumed in gas-fired power plants and natural gas sold on the retail market, amounted to 5,890,020 tCO_{2eq}, a decrease of 30.0% compared to 2022⁹ which was affected by a 35% reduction in gas-fired electricity generation in thermoelectric plants due to lower production in Italy and Iberia and the sale of thermal power plants in Russia and Argentina, as well as a reduction in gas retail sales (the amounts sold decreased by 19% from 10.2 bcm in 2022 to 8.3 bcm in 2023);

- indirect GHG emissions from **upstream of fuel oil, biomass, and other** (category 3A) amounted to 5,151 tCO_{2eq}, 13.2% less than in 2022. It should be noted that no biomass was purchased and transported to Italy during the year 2023. All biomass consumed was part of the residual stock from 2022;
- indirect greenhouse gas emissions from **third-party generation of electricity purchased and sold to end customers** (category 3D) amounted to 23,995,410 tCO_{2eq}. They decreased by 6.5% compared to 2022⁽⁹⁾, due primarily to a 7% reduction in the gap between energy

(10) 2022 figures were restated according to the methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".

sales to end customers (including by the Group's distribution companies operating in regulated markets in Latin America) and the Group's own production in countries where it has an integrated position (Italy, Spain, Brazil, Chile, Colombia, Argentina and Peru) and, to a lesser extent, to improved local emission factors in some of these countries;

- **indirect greenhouse gas emissions from products sold** (category 11), related to the use of natural gas sold to end customers in the retail market, amounted to 16,789,600 tCO_{2eq} in 2023. They decreased by 18.6% from 2022⁽¹¹⁾ due to a 19% reduction in natural gas volumes sold to end customers. The sale of assets and activities in Romania contributed to this reduction, even though with a limited impact since the sale was completed in October 2023.

Non-biogenic methane emissions (CH₄)

Enel monitors non-biogenic methane emissions throughout its value chain, including both direct and indirect emissions.

There are two sources of **direct methane emissions** (Scope 1):

- methane emissions from the combustion of fuels, mainly in power plants for electricity generation, and to

a lesser extent in auxiliary power plant services, grids, and building and fleet management. These emissions are calculated based on fuel consumption by applying the corresponding fuel-specific IPCC emission factor. This source amounted to 44,592 tCO_{2eq}, accounting for 0.13% of Scope 1 emissions in 2023;

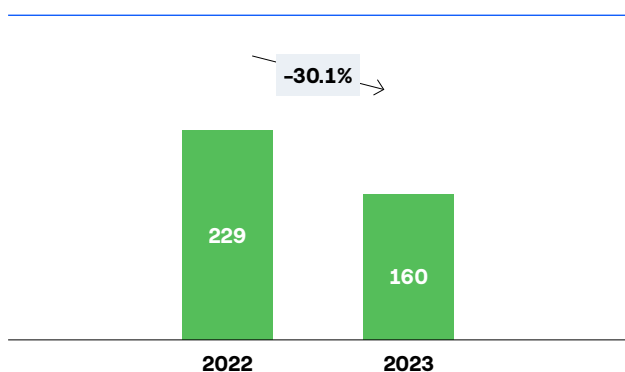
- methane emissions from leaks in gas-fired power plants. They are monitored and calculated according to internal procedures that follow the leak detection and repair (LDAR) method. This source amounted to 2,167 tCO_{2eq} in 2023, accounting for 0.01% of Scope 1 emissions in 2023.

As for **indirect methane emissions** (Scope 3), they relate mainly to fuel combustion and losses in the coal mining process and in the extraction and transportation of fossil fuels from the Group's suppliers. They are calculated using reliable secondary data for each specific phase (from the extraction phase to gas distribution) in line with IPCC factors, and are part of the previously disclosed data on Scope 3 emissions from upstream fuels.

All direct and indirect emissions from methane leaks and fuel combustion in the Group's power plants and all indirect emissions related to the natural gas retail business will be fully mitigated by 2040, when the Group completes the divestment of all its thermoelectric capacity and gas retail business.

Intensity metrics

SCOPE 1 GHG EMISSIONS INTENSITY RELATING TO POWER GENERATION (gCO_{2eq}/kWh)



This metric considers Scope 1 emissions Intensity relating to Power Generation, including CO₂, CH₄ and N₂O and excludes pure pumped storage hydropower generation, measured in grams of CO_{2eq} per kWh.

Worldwide greenhouse gas (GHG) emissions continued to increase in 2023, largely due to the economic rebound and a further increase in fossil fuel consumption, with the energy crisis and high natural gas and liquefied natural gas prices triggering an increased use of unabated coal as a cheaper but more emissive fuel.

The Group, however, managed to reduce its direct and indirect GHG emissions across its entire value chain by 26.3% overall, compared to the previous year. In addition, the Group, it also reduced its Scope 1 GHG emissions Intensity relating to Power Generation by more than 30.1%, from 229 gCO_{2eq}/kWh in 2022 down to 160 gCO_{2eq}/kWh in 2023. Such reduction is the result of a 12.9% increase in consolidated production from renewable sources and a 37.5% reduction in consolidated production from thermoelectric sources compared to 2022, as a consequence of the Group's strategy of shifting its energy mix portfolio towards renewables and to advancing in its decarbonization process.

(11) The 2022 values were recalculated based on methodological changes set out in the paragraph "Methodology for calculating greenhouse gas emissions".

Nevertheless, the war in Ukraine and the consequent restrictions in EU gas imports from Russia, which caused a decrease in gas availability accompanied by a surge in the wholesale prices of electricity and gas with severe effects for households and businesses, led the EU governments to implement a range of policy responses to mitigate the impact of higher costs and ensure the energy system's stability.

In particular, the Italian government responded with a national natural gas consumption containment plan that included, among its measures, the maximization of electricity generation in the thermoelectric sector using fuels other than gas. This was achieved through Decree 14/2022, which required the country's national transmission system operator (TSO) to define a program aimed at maximizing power generation from coal-fired power plants until the end of September 2023. Consequently, the TSO identified Enel's coal-fired power plants as essential and required them to maximize their production.

On the other hand, in Spain, the government authorization for the closure of As Pontes coal power plant requested by Enel's subsidiary Endesa in December 2019 for June 2021 was postponed until the end of 2023 as the power plant was identified as essential by the transmission system operator.

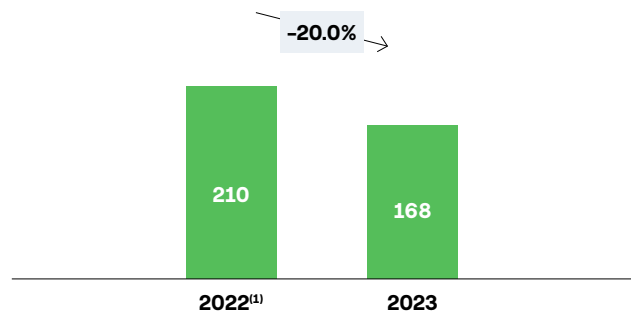
As a consequence of the unprecedented crisis that the European energy system faced in 2022 and 2023, the Group's emission reduction carried out in 2023 was not enough to meet the Scope 1 GHG emissions Intensity target relating to Power Generation set for 2023 and announced at the Capital Markets Day held in November 2020 for the launch of the 2021-2023 Strategic Plan. Due to the energy crisis, the intensity figure stood slightly higher than the target of 148 gCO_{2eq}/kWh. **In the absence of the above-mentioned effect, Enel would have been able to achieve a level of emission intensity well below the target of 148 gCO_{2eq}/kWh.**

As a consequence, the Group's sustainability-linked instruments which set the Scope 1 GHG emissions Intensity target relating to Power Generation of 148 gCO_{2eq}/kWh for 2023 will be subject to an increase of the relevant margin and Enel will comply with its obligations in accordance with the terms and conditions of the legal documentation of such Sustainability-Linked transactions.

Despite these unprecedented circumstances, the **Group's emissions intensity in 2023 remained in line with the 1.5 °C pathway**. In fact, the sector's decarbonization approach of the SBTi established a maximum threshold of 246 gCO_{2eq}/kWh for Enel for 2023, well above the actual figure.

Ultimately, **Enel's commitment to decarbonization remains confirmed for the short, medium and long term, as envisaged in the new 2024-2026 Strategic Plan**, which establishes a new short-term target for 2026 of 125 gCO_{2eq}/kWh. This new target has been included in the Sustainability Linked Financing Framework updated in January 2024 and linked to the first launch of sustainability-linked bonds in 2024, confirming Enel's commitment to the energy transition as well as contributing to the environmental and financial sustainability of the Group's development strategy. Furthermore, the target for 2030 to reduce 80% of the Scope 1 GHG emissions Intensity relating to Power Generation with respect to the 2017 baseline and the final target for 2040 aimed at reducing 100% of these emissions without relying on any type of offset or carbon removal mechanism remain confirmed as well.

SCOPE 1 AND 3 GHG EMISSIONS INTENSITY RELATING TO INTEGRATED POWER (gCO_{2eq}/kWh)



(1) Restated according to methodological changes described in the paragraph "Methodology for calculating greenhouse gas emissions".

This metric is calculated by combining the Group's direct GHG emissions (Scope 1, including CO₂, CH₄ and N₂O) from power generation and the Group's indirect GHG emissions (Scope 3) from generation of electricity purchased and sold to end customers, divided by electricity generation and purchases (excluding pure pumped stored hydropower generation).

In 2023, this value reached 168 gCO_{2eq}/kWh, reduced by 20.0% compared to 2022 following a:

- reduction of 37.2% in absolute Scope 1 emissions relating to Power Generation as a result of a 37.5% reduction in thermal power generation;
- a reduction of 6.5% in absolute Scope 3 emissions from energy purchased from third parties and sold to end customers, due to an overall 7% reduction in the gap between energy sales to end customers (including by the Group's distribution companies operating in regulated markets in Latin America) and the Group's own production in countries where it has an integrated position (Italy, Spain, Brazil, Chile, Colombia, Argentina and Peru) and, to a lesser extent, to improved local emission factors in some of these countries.

Financial, operational and environmental metrics connected with climate change

Financial metrics connected with climate change

The main metrics and financial goals regarding the risks and opportunities connected with climate change, as well

as the operational metrics along the entire value chain and the environmental ones, are reported below.

Financial metrics	UM	2023	2022	2023-2022	%
Ordinary EBITDA for low-carbon products, services and technologies ⁽¹⁾	billions of euros	17.9	13.9	4.0	29.4
Capex for low-carbon products, services and technologies	billions of euros	12.8	13.3	-0.5	-3.8
	% of total Capex	94.6	92.1	2.5	-
Revenues from coal plants	billions of euros	2.9	6.5	-3.6	-
	% of total revenues	3.0	4.6	-1.6	-
Revenues from thermal generation	billions of euros	14.0	24.1	-10.1	-72.1
	% of total revenues	14.7	17.2	-2.5	-
Revenues from nuclear plants	billions of euros	1.5	1.6	-0.1	-6.7
	% of total revenues	1.5	1.1	0.4	-
Debt ratio with sustainability criteria	%	64	63	1.0	-
Reference price of CO ₂	(€/ton)	71	86	-15.0	-17.4
Ratio of total absolute emissions (Scope 1, 2 and 3) to total revenue (location based)	tCO _{2eq} /€mil	987	910	77	7.8
Ratio of total absolute emissions (Scope 1, 2 and 3) to total revenue (market based)	tCO _{2eq} /€mil	1,000	919	81	8.1

(1) Ordinary EBITDA for low-carbon products, services and technologies represents the ordinary gross operating margin of the low-carbon products, services and technologies included in the following business lines: Enel Green Power, Enel Grids, Enel X and End-user Markets (excluding gas).

In 2023, Enel's ordinary EBITDA associated with low-carbon technologies, services and solutions was 17,982 million euros, an increase of 29.4% compared to 2022. Capex dedicated to low-carbon technologies, services and solutions is in line with 2022 values, reaching 12.8 billion euros, accounting for 94.6% of total Capex.

The percentage incidence of revenues from coal-fired plants is down, mainly attributable to lower quantities generated from thermoelectric sources, partly as a result of higher renewable production, especially from hydroelectric sources. Specifically, in 2023, revenues related to coal-fired plants correspond to 3.0% of the Group's total revenues.

Enel's strategy of promoting a sustainable financial model has contributed to reaching 64% of the debt related to the sustainability goals.

With regard to the effects of climate change issues, the Group considers them an implicit element in the application of the methodologies and models used to make estimates in the valuation and/or measurement of certain accounting items. Furthermore, the Group has also taken into account the impacts of climate change in the significant judgments made by management. In this regard, the main items included in the Integrated Annual Report for the year ended December 31, 2023 affected by the use of Management estimates and judgments concern the impairment of non-financial assets, bonds related to the energy transition, including those for decommissioning and the site restoration of certain power generation plants.

For further details, please refer to **section 6. Climate Change Disclosures** in the 2023 Integrated Annual Report.



Additional operational and environmental metrics connected with climate change

The following table shows other operational and environmental metrics related to climate change, in addition to the greenhouse gas emissions and operational metrics

(generation, distribution and customers) previously described in the paragraph "Enel's performance in tackling climate change".

	UM	2023	2022	2023-2022	%
Generation efficiency					
Average efficiency of thermal plants ⁽¹⁾	%	42.0	42.8	-0.8	-
Total direct fuel consumption	Mtoe	19.3	26.5	-7.2	-27.2
Electrification, energy efficiency and new services for customers					
Public charging points ⁽²⁾	no.	24,281	22,112	2,169	9.8%
Demand response capacity	MW	9,588	8,476	1,112	13.1%
Storage	MW	1,730	760	970	-
Environmental metrics					
Total specific withdrawals of fresh water ⁽³⁾	l/kWh _{eq}	0.20	0.23	-0.03	-13.0
Water withdrawals in water-stressed areas ⁽³⁾	%	23.3	19.3	4.0	-
Generation with water withdrawal in water stressed areas	%	11.4	13.3	1.9	-

- (1) The calculation does not consider Italian O&G plants being decommissioned or of marginal impact. Average efficiency is calculated on the basis of the plant fleet and is weighted by generation.
- (2) It should be noted that the figures shown, if they also included the charging points of companies operated in joint ventures, would be 25,337 as of December 31, 2023, and 22,617 as of December 31, 2022.
- (3) As of last year, Enel has strengthened its commitment to preserving water resources, aiming to reduce freshwater withdrawal by 65% from 2017. By focusing on vulnerable water resources, Enel underlines its dedication to environmental protection and the common good, in line with EU sustainability standards (ESRS-E3 standard).

Carbon credits purchase in voluntary markets

During 2023, carbon credits in the voluntary market totaling 82,256 tCO_{2eq} were purchased and cancelled to meet specific customer requests. The purchase involved VERs

certified by Verra generated between 2015 and 2021. For more details, please refer to the following table:

Type of credit	Vintage	Technology	Certification	Total (t)
VER	2016	REDD+	Verra	1,000
VER	2015-2019	RES	Verra	27,256
VER	2021	Methane Recovery	Verra	54,000

These volumes have not been discounted in the calculation of direct and indirect emissions disclosed in the Sustainability Report and are not part of the Group's Net Zero commitment, since this commitment does not envisage the use of credits linked to projects that avoid greenhouse gas emissions.

In the future, however, the Group may purchase, directly and/or indirectly, carbon removal credits purely for the purpose of neutralizing residual emissions (with a volume of less than 2.5 MtCO_{2eq}) while meeting the 1.5 °C target as defined by SBTi. No such credits were purchased in 2023.

Financial and operational targets

The main financial and operational targets that will contribute to reducing the Group's direct and indirect emissions along the entire value chain have been reported in

the paragraph "The strategy for tackling climate change" in this chapter.