2025 THEMATIC REPORT

# 2025

# GHG INVENTORY

Quantification and reporting of greenhouse gas emissions in accordance with the Corporate GHG Protocol

**BUILD THE FUTURE THROUGH SUSTAINABLE POWER**

# INDEX

**1. Enel's zero emission ambition** ..... 3

**2. Greenhouse gas emissions inventory report** ..... 4

2.1. Introduction ..... 4

2.2. Organisational and Operational boundaries ..... 4

2.3. Changes implemented in 2025 ..... 5

2.4. Calculation methodology and process ..... 5

2.5. Uncertainty Assessment ..... 11

**3. 2025 GHG emissions inventory** ..... 12

3.1. Scope 1 Emissions ..... 13

3.2. Scope 2 Emissions ..... 15

3.3. Scope 3 Emissions ..... 16

3.4. Intensity metrics ..... 18

**4. Annexes** ..... 19

4.1. 2025 GHG inventory statement ..... 19

4.2. 2022 GHG inventory statement ..... 21

4.3. DNV Verification Statement ..... 22

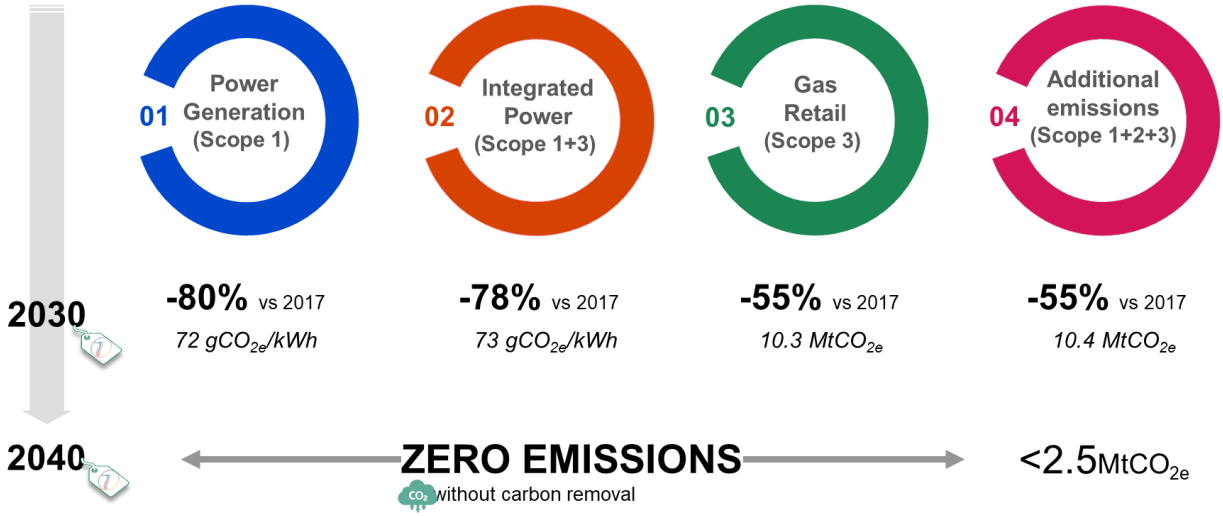
4.4. List of Companies within the scope of the inventory ..... 26

# 1. Enel's Zero Emission Ambition

The Enel Group is committed to developing a business model aligned with the goals of the Paris Agreement (COP 21), aiming to limit the average global temperature increase to below 1.5°C and to achieve zero emissions by 2040.

Enel has developed a decarbonization roadmap addressing all direct and indirect emissions throughout its value chain. The plan consists of four targets, covering these emissions, and has been validated by the Science Based Targets initiative (SBTi) and aligned with a 1.5ºC pathway.

## GHG reduction targets validated by SBTi in coherence with 1.5°C Pathway




By promoting renewable energies and a complete phase-out of fossil fuels as well as grids digitization and consumption electrification, by 2040, Enel aims to mitigate 100% of emissions related to the three key GHG reduction targets (power generation as well as power and gas sales activities), versus the 2017 baseline. Specifically:

- **by 2028**, Enel's renewable capacity is expected to reach more than 80 GW (including managed capacity), with the share of zero-emission generation reaching about 88% [1] (including managed production). In addition, progress towards digitalization of networks will increase the share of digitalized customers to around 73%[2];
- **by 2030**, around 85% of the installed capacity will be renewable (including managed capacity), with the share of zero-emission generation reaching about 90% (including managed production), and 100% of network customers will be fully digitalized.
- **by 2040** all installed capacity will be 100% renewable, the Group will have phased-out both thermoelectric generation and retail gas activities and 100% of the electricity sold will be produced from renewable sources.

[1] Considers nuclear and renewable production (consolidated and unconsolidated).

[2] Active electricity distribution customers with smart meters/total number of electricity distribution customers.

Enel's four GHG targets will allow a reduction of nearly 99% of total Group GHG emissions compared to 2017, beyond the overall 90% threshold expected by global standards. However, the Group's ambition aims at reaching a complete decarbonization across its value chain, for which several exogenous factors shall be overcome in the short to medium term (including new carbon free solutions in the supply chain at large-scale, change of certain market conditions and policies to enable zero emissions business models). In case a marginal volume of residual emissions remains by 2040, expected to be below 2.5 $MtCO_2e$, it will be neutralized through carbon removal and mostly related to indirect emissions (Scope 2 and 3).

# 2. Greenhouse gas emissions inventory report

## 2.1. Introduction

Enel is committed to ensuring increased transparency and accountability on the Group's progress towards reducing greenhouse gas emissions across the entire value chain. As a result, the Group discloses the GHG emissions inventory from its business activities - including the generation and distribution of electricity and the sale of electricity and gas to end customers - every year.

This public report is prepared in accordance with the international Greenhouse Gas Protocol – published by the World Business Council for Sustainable Development and World Resources Institute.

## 2.2. Organisational and Operational boundaries

Enel's organizational and operational boundaries for GHG emission reporting are defined in accordance with the GHG Protocol.

Concerning the operational boundaries, direct and indirect greenhouse gas emissions are reported covering the following activities:

- **Power Generation**: including commodities supply chain, the construction and operation of thermoelectric, renewables and nuclear power plants.
- **Power Distribution**: including the construction and operation of electricity grids.
- **Market**: including the sale of electricity, gas and other energy solutions.
- **Real Estate**: including the management of buildings and vehicles fleet.
- **Others**: including the manufacturing of photovoltaic panels in proprietary assets, management of port terminals in Spain, and management of the Santa Barbara site in Italy (ex-mining site).

Concerning the organizational boundaries, Enel applies a combination of financial and operational control approach:

- GHG data includes 100% of GHG emissions from facilities and activities where Enel has the financial control over the operations; except for the nuclear activity, managed under a shared financial control approach, so data is reported based on criteria in proportion to ownership.
- Furthermore, for the purpose of the elaboration of the annual Sustainability Statement and in coherence with ESRS E2 requirements, GHG data is also collected for investees such as associates, joint ventures, or unconsolidated subsidiaries that are not fully consolidated in the financial statements of the consolidated accounting group, as well as contractual arrangements that are joint arrangements not structured through an entity (i.e., jointly controlled operations and assets), for which it has operational control.

## 2.3. Changes implemented in 2025

### 2.3.1. Perimeter changes

Acquisition in February 2025 of the entire share capital of Corporación Acciona Hidráulica, which holds a portfolio of hydro plants for a total installed capacity of 626 MW.

As a result, the 2022 greenhouse gas (GHG) data have been revised to include biogenic methane ($CH_4$) emissions from this fleet's basins, estimated consistently with the 2025 calculation methodology. Other Scope 1 and 2 emissions have not been included due to insufficient operational data and are considered not relevant.

### 2.3.2. Methodology changes

**Fuel- and energy-related activities not included in Scope 1–2 (Scope 3 category 3)**: The calculation regarding Coal logistics considers fugitive $CH_4$ emissions from mining activities related to the amount of coal consumed at the Group's coal plants. It is calculated based on the actual share between underground and open-pit coal procured by the Group. For 2024, the recalculation showed an approximate 50/50 distribution. In the absence of exact historical data, the same 50/50 share is assumed for preceding years.

## 2.4. Calculation methodology and process

The **internal policy** in place ***"Definition and Method of GHG Emissions calculation",*** sets the common framework for the collection and analysis of GHG data and performance, considering internal and external purposes and both Group's and Enel stakeholders' possible benefits. The procedure collects and harmonizes definitions and methods, internally adopted and based on international standards, to quantify the impact of the Enel Group in GHG terms, describing all the business processes aimed to measure the various GHG related aspects.

GHG data and primary operational data are collected through the **Group's environmental database** on an annual basis, except for specific GHG data in which the frequency is greater. Data are collected by technology and geography, directly from the different organisational levels (either site level or country level, depending on the source) and undergo internal formal controls and consistency assessment and subsequent validation by the different business lines and at consolidated level.

Enel takes into account the principles, requirements, and guidelines set out in the **Corporate Accounting and Reporting Standard (2004 edition)** of the **Greenhouse Gas Protocol**. Furthermore, it includes emissions of $CO_2$, $CH_4$, $N_2O$, HFCs, PFCs, $SF_6$, and $NF_3$, and uses the most recent global warming potential (GWP) values published by the IPCC in its Sixth Assessment Report (AR6), based on a 100-year time horizon, to calculate $CO_2$-equivalent ($CO_2e$) emissions for gases other than $CO_2$. Additionally, all data included in the inventory refer to gross greenhouse gas emissions and therefore do not include the use of carbon credits. In 2025, methane GWP values have been updated with differentiation between fossil and biogenic methane in line with the AR6.

Therefore, the methodology and the main assumptions considered in the calculation of GHG emissions in 2025 are as follows:

| GHG source | Calculation method |
|---|---|
| **Scope 1** | |
| GHG emissions ($CO_2$, $CH_4$ and $N_2O$) from the combustion of fuels for Thermoelectric generation activities, including CCGT, Oil&Gas and coal thermal plants and biomass. | GHG direct emissions are calculated for each combustion unit and fuel type at thermal power plant level, based on fuel consumption (for $CO_2$, $CH_4$ and $N_2O$) and the corresponding fuel-specific IPCC GHG emission factor; and/or through direct measurement at the chimney (only for $CO_2$).<br><br>$CO_2$ emissions from thermoelectric generation operated within EU are subjected to yearly certification by an external certifier for the participation to the European mechanism of the Emission Trading System (ETS).<br><br>$CO_2$ emissions from thermoelectric generation operated in Chile are subjected to yearly certification by environmental authority (*Impuestos Verdes*). |
| GHG emissions ($CO_2$, $CH_4$ and $N_2O$) from the combustion of fuels for:<br>auxiliary engines in:<br>• Auxiliary services (including gensets) in nuclear and renewable plants.<br>• Auxiliary services (including gensets) in Power distribution activities.<br>• Transportation of fuel and subproducts on vessels under own operational control.<br>• Heating systems and canteens in buildings and offices<br>• Company vehicles fleet. | GHG direct emissions are calculated based on fuel consumption and the corresponding fuel-specific IPCC GHG emission factor |
| Fugitive $NF_3$ emissions in photovoltaic panels manufacturing | $NF_3$ is used as a cleaning agent in the photovoltaic panel manufacturing process at the 3SUN factory. Emissions are periodically calculated based on replenishments, and the equivalent atmospheric $CO_2$ emissions are determined by applying the corresponding GWP (AR6). |
| Fugitive $CH_4$ emissions in gas-fired power plants | Methane losses are assessed by measuring $CH_4$ quantities and calculated using the LDAR (Leak Detection and Repair) methodology. |
| Fugitive HFCs emissions in thermoelectric and hydropower | HFC losses used in air conditioning and refrigeration systems are periodically calculated based on plant replenishments and/or failures leading to replacement. Emissions are reported |

| | |
|---|---|
| thermal plants, offices, and PV manufacturing sites | using the commercial name of the gas and the corresponding $CO_2e$ emission value calculated based on the GWP (AR6). |
| Fugitive $SF_6$ emissions in power generation and distribution activities | $SF_6$ losses in the distribution network are calculated periodically through two components: replenishment of equipment with $SF_6$ and failures in the equipment leading to replacement. |
| Fugitive biogenic $CH_4$ emissions in hydroelectric basins | Fugitive methane emissions from hydroelectric reservoirs originate from the decomposition of floodplain organic material and algal material. They are calculated using the IPCC method, considering the reservoir area and the climatic zone of their location. |
| **Scope 2** | |
| GHG emissions associated with electricity consumption | GHG emissions are calculated based on the total energy consumed by the Group's various assets (power plants, grids, buildings and ports) at the national level, applying the corresponding emission factor of the country's electricity system according to the following criteria:<br><br>• **Location-based model:** The coefficient used represents the amount of GHG emissions released by power plants connected to the energy system per unit of energy produced by those plants, measured in grams of $CO_2e$ per kWh. Factors are collected from National Authorities for core countries (Italy[3], Spain, Brazil, Colombia, Chile, and the USA), while for non-core countries, data is sourced from reliable third-party databases (Enerdata).<br><br>• **Market-based model:** The volume of energy consumed associated with renewable attributes (with certificates of origin in Europe) is considered zero-emission, while a residual emission factor is applied to the remaining energy. This residual factor excludes the energy input into the electricity system associated with renewable attributes. In particular, in the case of Spain, the residual mix factor used is that published by The National Commission for Markets and Competition (CNMC In Spanish), while in the case of Italy the thermoelectric emissions factor published by ISPRA has been used as the residual mix factor was not available from this or any other competent authority at the time this report's |

[3] The source for Italy's Location Based and Market Based calculations emission factors is "$CO_2$ emissions in the national and regional power sector" published by ISPRA in 2025.

| | |
|---|---|
| | publication. Furthermore, in countries where there are no local government-managed renewable energy certification schemes, location-based factors are used. |
| GHG emissions associated with technical network losses | It includes GHG emissions from grids losses as a consequence of the Joule effect and the use of meters, while it does not include auxiliary services or consumption for own use (already considered in Scope 2 emissions from electricity consumption).<br>GHG emissions are calculated based on the amount of energy fed into the grid that exceeds the energy produced by the Group in each country. This approach avoids potential double counting of GHG emissions already included in Scope 1. Finally, the corresponding grid loss rate and the country's emission factor are applied (following the same criteria as described above for location-based and market-based models). |
| **Scope 3** | |
| Category 1. Products and Services | It includes GHG emissions from the supply chain related to works and services. These are calculated based on the amount ordered (€) for each merchandise group and its corresponding specific emission factor.<br>Specific emission factors for works are based on analytical models tailored to the main activities within the specific business lines. For each services merchandise group, an average emission factor from international databases is considered. |
| Category 2: Capital Goods | It includes GHG emissions (GHG) from the supply chain related to the production of supplies. These are calculated based on the amount ordered (€) for each merchandise group and its corresponding specific emission factor.<br><br>For major supplies, emission factors are based on data provided by suppliers via their environmental product declarations (EPD), ISO CFP 14067 certifications, or the LCA (Life Cycle Assessment) methodology.<br>For other supplies, an average emission factor from international databases is considered. |
| Category 3. Fuels and energy-related activities not included in Scope 1 and 2 | Indirect GHG emissions (GHG) related to:<br>• **Coal logistics**: considers fugitive $CH_4$ emissions from mining activities related to the amount of coal consumed at the Group's coal plants, based on the actual share of underground and open-pit coal procured by the |

| | |
|---|---|
| | Group. Also, indirect emissions from the maritime transport of coal are considered calculated based on the estimated fuel consumption of third-party ships.<br><br>• **Fuel-oil and gas logistics:** Covers the entire value chain from extraction to delivery, using secondary data for each specific phase and including $CO_2$, $CH_4$ (from both combustion and leaks), and $N_2O$ emissions. The calculation includes indirect emissions from both the volume of fuel-oil and gas consumed at thermoelectric plants and natural gas sold on the retail market to end customers.<br><br>• **Biomass logistics**: Calculated based on the volume transported by road, using secondary data, standard factors, and assumptions.<br><br>• **Electricity purchase for resale**: Energy purchased from other producers and resold to end customers is calculated by assuming the Group's integrated position at the national level, estimating the amount of energy as the difference between energy sales (including also from distribution system operators in regulated markets) and own production, applying the same national emission factors used for Scope 2 (location-based). |
| Category 4. Upstream transportation and distribution | Indirect GHG emissions (GHG) from fuel consumption for the road transportation of other fuels (not included in category 3), raw materials, and waste, as well as from third-party maritime transport of ash and other by-products from coal, are calculated based on the volume transported by road, using secondary data, standard factors, and assumptions.<br>Emissions from upstream transportation and distribution do not consider the PV panel manufacturing plant as deemed to be not relevant. |
| Category 6: Business Travel | Emissions from business travel are calculated using the distance-based methodology, considering the mode of transport (air and train) and hotel accommodations, applying DEFRA emission factors for each type.<br>Air travel emissions include radiative forcing in their calculation.<br>This category covers Enel's main countries, which account for about 99% of Group employees. |

| | |
|---|---|
| Category 7: Employee Commuting | Emissions from employee commuting are calculated based on available information from employees and/or surveys regarding the means of transport used to commute to and from work each day. In countries where no data is available, standard values are applied based on results from other Group countries.<br>Emission factors for each mode of transport are applied using local sources when available or international databases such as DEFRA.<br>This category covers Enel's main countries, which account for about 98% of Group employees. |
| Category 11 – Use of sold products | Indirect GHG emissions (GHG) from the use of natural gas sold to end customers in the retail gas market are calculated based on the amount of energy sold, applying the corresponding emission factors from the IPCC. |

The following Scope 3 categories of the GHG Protocol are currently excluded from Enel's GHG emissions inventory:

- **Category 5 (Waste from Operations):** Enel is currently excluding this category as considered not relevant based on internal estimations.
- **Category 8 (Upstream Leased Assets):** GHG emissions related to buildings and offices are already accounted for in Scope 1 and Scope 2 calculations.
- **Category 9 (Downstream Transportation and Distribution):** This category applies only to PV module manufacturing, and it has been excluded as deemed to be not relevant.
- **Category 10 (Processing of Sold Products):** Not applicable, considering the types of products and services sold by the company.
- **Category 12 (End-of-Life Treatment of Sold Products):** This category applies only to PV module manufacturing, and it has been excluded as deemed to be not relevant.
- **Category 15 (Investments):** Currently considered not relevant.

## 2.5. Uncertainty Assessment

### 2.5.1. Scope 1

94.3% of Scope 1 emissions relate to the combustion of fossil fuels for electricity generation in thermoelectric power plants (including oil, gas and CCGT), while 92% are regulated by Emission Trading Systems or similar, so that the uncertainty is assured by local regulation certification schemes.

The greenhouse gas emissions (measured in $CO_2e$) for the generation of $CH_4$ and $N_2O$ are calculated based on the fuels consumption uploaded in the Group's database on annual basis and subject to internal control mechanisms. The fuel volumes used in power plants are subject to metrological checks also for billing purposes.

For other greenhouse gas emissions values, related to fugitive emissions, data is collected and calculated using official sources, including the IPCC emission factors (Sixth Assessment Report (AR6 - 100 year) and GWP of the GHG Protocol.

### 2.5.2. Scope 2

Scope 2 emissions calculation from technical network losses relies on operational data, specifically, the volume of energy injected in the network and the percentage of technical network losses, whose calculation is governed by internal procedures compliant with local regulation and with recognized standards. Enel considers most updated operating data available at the time of elaboration of the GHG inventory report, which might be slightly different with respect to final data certified by national authorities, even though with a negligible impact on GHG emissions and hence with minimum degree of uncertainty.

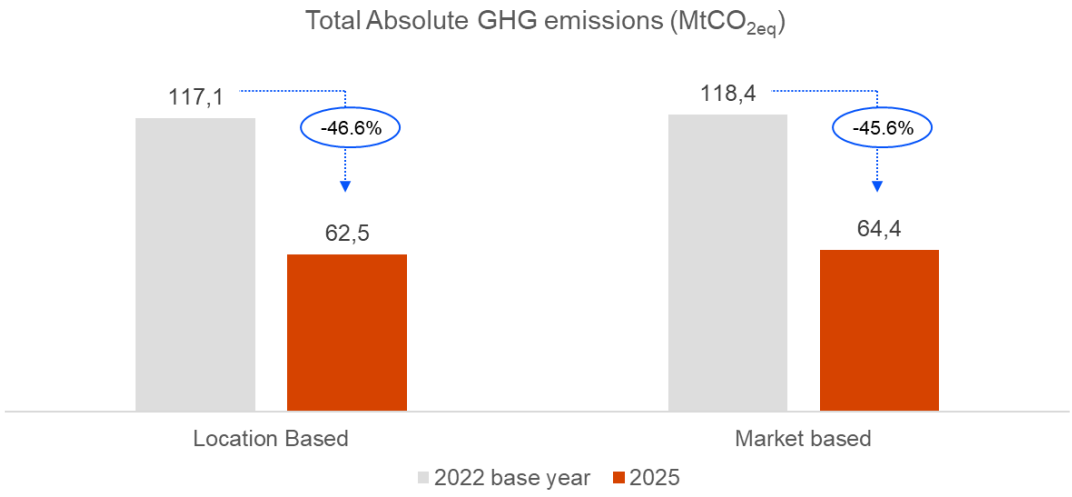
Country energy mix factors are extracted from official sources for Group's core countries (Italy, Spain, Chile, Colombia, Brazil, Argentina and United States), while from reliable third data providers for non-core countries. The selection of these emission factors is intended to minimize uncertainty as much as possible.

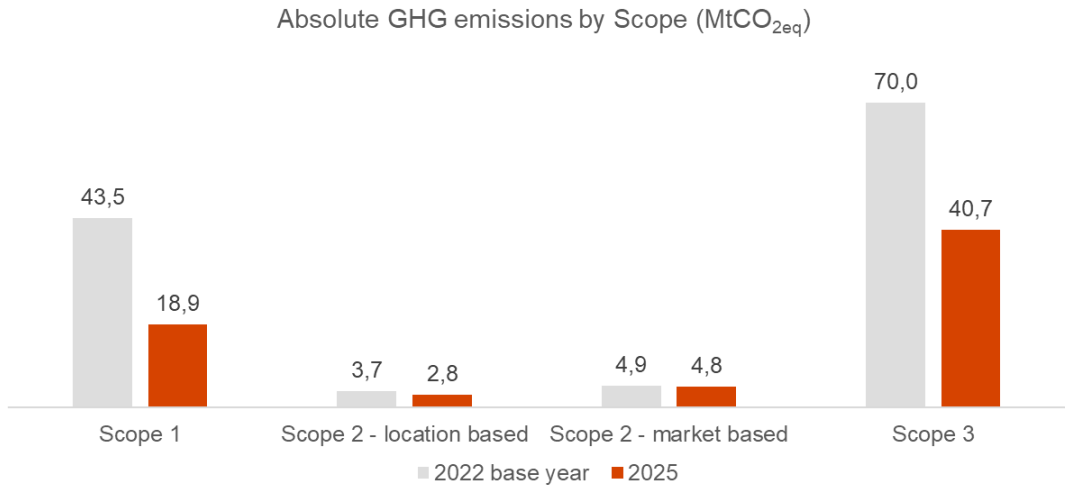
### 2.5.3. Scope 3

With reference to Scope 3 – Category 1 (Products and services), it is possible to qualitatively assess a low level of uncertainty for the calculation of the emissions of the strategic categories, based on the average of the data obtained directly from suppliers through EPD (Environmental Product Declaration) or ISO CFP 14067 certifications; an average level of uncertainty can be assessed for the categories estimated through international databases based on LCA methodologies and a medium / high level of uncertainty can be reported for the tail categories be estimated using the average emission factors of the economic sector to which they belong.

Concerning Scope 3 – Category 3 (Fuel and energy related activities not included in Scope 1 or 2) Category 4 and Category 11 GHG emissions are calculated based on operational data collected through certified financial and non-financial accounting systems, implementing carbon factors derived from IPCC, National Authorities, reliable third-party data providers or even existing contracts.

# 3. 2025 GHG emissions inventory




In 2025, direct and indirect absolute emissions (including Scope 1, 2 and 3) amounted to **62,526,618 $tCO_2e$,** reaching the lowest rate

This is mainly due to an overall improvement in main operational performance metrics, which contributed to reducing direct and indirect emissions across the entire value chain, including, among others: renewables capacity and production, thermoelectric capacity and production, the gap between electricity sales in the retail market and own production in specific countries; natural gas sales in retail market; and the ratio between GHG emissions and supply chain expenses. Furthermore, the digitalization and automation of the power grids also contribute by reducing network losses and enabling the development of renewables, playing a key role in the Group's decarbonization performance, while also in the decarbonization of the energy systems in which the group operates.

## 3.1. Scope 1 Emissions

In 2025, **Scope 1** GHG emissions amounted to **18,945,401 $tCO_2e$**, representing 30.3% of total GHG emissions and entailing a 56.4% reduction with respect to 2022 restated baseline.

| | | TOTAL ($tCO_2e$) | | | Fuel combustion ($tCO_2e$) | | | Fugitive emissions ($tCO_2e$) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Activity** | **GHG Source description** | **2025** | **2022 Baseline (Restated)** | **%** | **$CO_2$** | **$CH_4$** | **$N_2O$** | **$SF_6$** | **HFCs** | **$NF_3$** | **$CH_4$ non bio** | **$CH_4$ bio** |
| Power Generation | Thermoelectric generation activities, including gas and coal fired power plants, while also non $CO_2$ emissions from biomass | **17,871,012** | 42,552,748 | -58% | 17,831,552 | 13,095 | 26,366 | - | - | - | - | - |
| | Auxiliary engines in nuclear and renewable plants. | **47,729** | 19,077 | 150% | 47,640 | 32 | 58 | - | - | - | - | - |
| | Transportation of fuels (LNG and coal) on vessels under own operational control | **114,623** | 148,917 | -23% | 113,279 | 11 | 1,333 | - | - | - | - | - |
| | Transportation of byproducts (ashes and gravel) on vessels under own operational control | **-** | - | - | - | - | - | - | - | - | - | - |
| | Fugitive $CH_4$ emissions in gas fired power plants | **2,448** | 4,141 | -41% | - | - | - | - | - | - | 2,448 | - |
| | Fugitive $SF_6$ emissions in insulating systems for power generation | **47,703** | 37,743 | 26% | - | - | - | 47,703 | - | - | - | - |
| | Fugitive HFCs emissions in thermoelectric and hydropower plants, and PV manufacturing sites | **1,712** | 4,392 | -61% | - | - | - | - | 1,712 | - | - | - |
| | Fugitive $NF_3$ emissions in photovoltaic panels manufacturing | **6** | 4 | 46% | - | - | - | - | - | 6 | - | - |
| | Fugitive biogenic $CH_4$ emissions in hydroelectric basins | **323,555** | 323,881 | -0.1% | - | - | - | - | - | - | - | 323,555 |
| Power Distribution | Auxiliary engines in power distribution activities. | **336,633** | 222,931 | 51% | 335,475 | 409 | 749 | - | - | - | - | - |
| | Fugitive $SF_6$ emissions in insulating systems for power distribution | **103,010** | 104,785 | -1.7% | - | - | - | 103,010 | - | - | - | - |
| Real Estate Manag. | Heating systems and canteens in offices (diesel and natural gas), including all properties in all Business Lines and Group offices. | **10,035** | 6,011 | 67% | 10,024 | 6 | 6 | - | - | - | - | - |
| | Company vehicles fleet (diesel and gasoline) | **85,535** | 68,472 | 25% | 83,666 | 317 | 1,552 | - | - | - | - | - |
| | Fugitive HFCs emissions in buildings | **1,399** | 730 | -92% | - | - | - | - | 1,399 | - | - | - |
| | **TOTAL** | **18,945,401** | **43,493,834** | **-56%** | **18,421,636** | **13,869** | **30,063** | **150,713** | **3,111** | **6** | **2,448** | **323,555** |

The share of Scope 1 GHG emissions (including $CO_2$, $CH_4$ and $N_2O$) related to fuel combustion process for power generation accounted for 94.8% of the total value of Scope 1. These emissions, amounted to 17,871,012 $tCO_2e$, were reduced by 58.0% compared to 2022 restated baseline as a consequence of a remarkable reduction in thermoelectric production with respect to 2022, along with the increase in renewable production that contributed to displace energy production from fossil fuels.

The percentage of emissions subject to local regulatory schemes was 92%, with the following breakdown:

- 77% of total Scope 1 emissions related to power plants under the EU-ETS program in Italy and Spain.
- 15% of total Scope 1 emissions related to power plants under the green tax system in Chile (*Sistema de Impuestos Verdes*).

Other Scope 1 GHG emissions (including those from auxiliary services in power plants and distribution sites, fugitive emissions, vehicles fleet, buildings and fuel transportation in own vessels) amounted to 1,074,389 $tCO_2e$ combined, representing 5.2% of total Scope 1 emissions.

## 3.2. Scope 2 Emissions

In 2025, **Scope 2** GHG emissions amounted to **2,841,900** $tCO_2e$ according to the location-based approach, representing 4.5% of total GHG emissions, while 22.3% lower than 2022 restated baseline. Instead, they amounted to 4,754,552 $tCO_2e$ considering the market-based model.

| Activity | GHG Source description | LOCATION BASED ($tCO_2e$) | | | MARKET BASED ($tCO_2e$) | | |
|---|---|---|---|---|---|---|---|
| | | 2025 | 2022 Baseline (Restated) | % | 2025 | 2022 Baseline (Restated) | % |
| Power Generation and Others | Electricity consumption from the grid in power plants, including hydro pumped-storage plants | 428,058 | 635,237 | -32.6% | 755,186 | 846,206 | -10.8% |
| | Electricity consumption from the grid in terminal ports in Spain, PV manufacturing site in Italy (3SUN) and non-operating mine site in Italy (Santa Barbara) | 11,998 | 3,975 | 201.9% | 1,174 | 1,630 | -28.0% |
| Power distribution | Electricity consumption from auxiliary services in grids | 75,194 | 105,717 | -28.9% | 133,199 | 149,254 | -10.8% |
| | Technical network losses | 2,282,061 | 2,882,695 | -20.8% | 3,833,856 | 3,927,496 | -2.4% |
| Real Estate Management | Electricity consumption in buildings and offices | 44,590 | 30,909 | 44.3% | 31,136 | 22,027 | 41.4% |
| **Subtotal from electricity consumption** | | **559,839** | **775,837** | **-27.8%** | **920,696** | **1,019,117** | **-9.7%** |
| **Subtotal from technical network losses** | | **2,282,061** | **2,882,695** | **-20.8%** | **3,833,856** | **3,927,496** | **-2.4%** |
| **TOTAL** | | **2,841,900** | **3,658,532** | **-22.3%** | **4,754,552** | **4,946,613** | **-3.9%** |

The two sources related to Scope 2 emissions experienced a decrease with respect to 2022 restated baseline. In particular:

- **Scope 2 emissions from electricity consumed by the Group** decreased by 27.8% as a consequence of the improvement in the local emission factors in some countries where the Group operates, despite an increase of 4.5% in consumed electricity. The resulting emissions amount to 559,839 $tCO_2e$.
- **Scope 2 emissions from technical network losses** decreased by 20.8%, as a consequence of the reduction of the energy technical losses, together with an improvement of emission factor in the relevant countries, resulting in 2,282,061 $tCO_2e$.

## 3.3. Scope 3 Emissions

In 2025, **Scope 3** GHG emissions amounted to **40,739,317 $tCO_2e$**, representing 65.2% of total GHG emissions, and were decreased by 41.8% compared to 2022 restated baseline.

| Activity | GHG Source description | TOTAL ($tCO_2e$) 2025 | 2022 Baseline (Restated) | % |
|---|---|---|---|---|
| **Upstream Scope 3 emissions** | | | | |
| All | Category 1 - Purchase of goods and Services | 4,570,421 | 6,396,561 | -28.5% |
| | Category 2 – Capital Goods | 4,781,225 | 8,014,555 | -40.3% |
| Power Generation | Category 3 - Fuels and energy-related activities not included in Scope 1 and 2: | | | |
| | • Category 3A - Upstream emissions of purchased coal | 97,777 | 1,882,384 | -94.8% |
| | • Category 3A - Upstream emissions of purchased natural gas | 4,310,935 | 7,065,275 | -39.0% |
| | • Category 3A – Upstream emissions of purchased fuel oil | 1,139,876 | 771,997 | 47.7% |
| | • Category 3A - Upstream emissions of purchased biomass | 2,110 | 2,554 | -17.4% |
| Market | • Category 3D – Third parties' generation of purchased electricity that is sold to end customers | 13,049,345 | 25,617,368 | -49.1% |
| All | Category 4 - Upstream transportation and distribution | 11,074 | 9,824 | 12.7% |
| | Category 6 Business Travel | 18,525 | 29,894 | -38.0% |
| | Category 7 Commuting | 37,996 | 24,422 | 55.6% |
| **Downstream Scope 3 emissions** | | | | |
| Market | Category 11 - Use of sold products: Use of natural gas sold to end customers in retail market | 12,720,034 | 20,162,109 | -36.9% |
| | **TOTAL** | **40,739,317** | **69,976,944** | **-41.8%** |

Almost all Scope 3 categories considered in 2025 GHG inventory decreased compared to 2022 restated baseline, namely:

- Indirect GHG emissions from the **supply chain** amounted to 4,570,421 $tCO_2e$ from works and services (considered in category 1), while 4,781,225 $tCO_2e$, from supplies (considered in category 2). These emissions were reduced by 28.5% and 40.3% respectively compared to 2022 restated baseline, due to a reduction in the absolute amount of order expenses and the purchase of materials with a lower carbon footprint.
- Indirect GHG emissions from **upstream coal** (Category 3.A), equal to 97,777 $tCO_2e$ in 2025, experienced a decrease of 94.8%, as a consequence of the 92.4% reduction in the production of coal-fired power plants (from 19.7 TWh 2022 to 1.5 TWh in 2025)
- Indirect GHG emissions from **upstream gas** (category 3.A), including extraction and transportation of natural gas consumed in gas-fired power plants and natural gas sold in retail market, amounted to 4,310,935 $tCO_2e$, which entails a decrease of 39.0% from 2022 restated baseline, influenced by a 63% reduction in gas-fired

production (both CCGT and Oil&Gas), as well as the 37% reduction in gas retail sales.

- Indirect GHG emissions from **upstream fuel oil** (category 3.A), including production and transportation, amounted to 1,139,876 $tCO_2e$ and they were increased by 47.7% from the 2022 restated baseline.

- Indirect GHG emissions from **upstream biomass** (category 3.A), amounted to 2,110 $tCO_2e$ were reduced by 17.4% from the 2022 restated baseline.

- Indirect GHG emissions from **third parties' generation of purchased electricity that is sold to end customers** (category 3.D), amounted to 13,049,345 $tCO_2e$. They decreased by 49.1% from 2022 restated baseline due to, firstly, an overall reduction of 28% in the gap between energy sales to end customers (including also from distribution system operators in regulated markets) and own production in the countries in which the Group has an integrated position (Italy, Spain, Brazil, Chile, Colombia, Argentina and Peru until its disposal date), and secondly, the improvement of local emission factors in some of these countries.

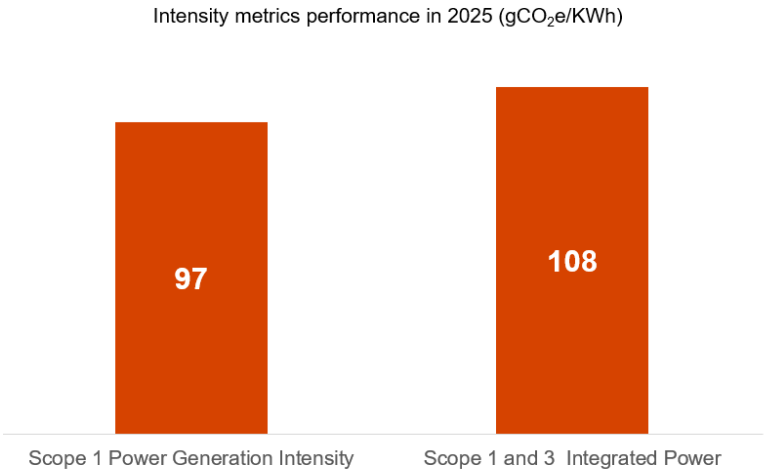
- Indirect GHG emissions related to the **fuel consumed from road transportation of other fuels not included in category 3, raw materials and waste** (category 4) amounted to 11,074 $tCO_2e$, 12.7% higher than 2022.

- Emissions from **business travel** (category 6) amounted to 18,525 $tCO_2e$, these emissions were reduced by 38.0% due to a decrease in the number of trips taken leading to a reduction in both the travel distances and hotel nights considered for the calculation.

- Emissions from **employee commuting** (category 7) amounted to 37,996 $tCO_2e$. They were increased by 55.6% due to an increase in the frequency of employees commuting to the office.

Indirect **GHG emissions from sold products** (category 11), related to the use of natural gas sold to end customers in retail market, amounted to 12,720,034 $tCO_2e$. They decreased by 36.9% from 2022 due to the same reduction in gas volumes sent to end customers (from 10.0 bcm in 2022 to 6.3 bcm in 2025).

## 3.4. Intensity metrics




The main indicators relating to the Group's specific emissions, which constitute the two GHG intensity reduction targets validated by SBTi, experienced the following performance:

- The ratio between total Group Scope 1 GHG emissions (including $CO_2$, $CH_4$ and $N_2O$) from power generation and the Group's total production (excluding hydro-pump storage), amounted to **97** $gCO_2e$/kWh in 2025.
- The ratio between the combination of Group Scope 1 GHG emissions (including $CO_2$, $CH_4$ and $N_2O$) (measured in $gCO_2e$) along with Group Scope 3 greenhouse gas emissions from the generation of purchased electricity that is sold to end customers (measured in $gCO_2e$), and the amount of electricity production (measured in kWh) (excluding hydro-pumping) along with the electricity purchased for resale (measured in kWh), amounted to **108** $gCO_2e$/kWh.

# 4. Annexes

## 4.1. 2025 GHG inventory statement

The GHG inventory statements for 2025 were audited by DNV, with a reasonable level of certainty for Scope 1 and Scope 2 emissions and with a limited level of certainty for Scope 3 emissions. 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). The total emissions subject to verification are shown below:

| 2025 GHGs ($tCO_2e$) | TOTAL | $CO_2$ | $CH_4$ | $N_2O$ | $SF_6$ | HFCs | $NF_3$ |
|---|---|---|---|---|---|---|---|
| **DIRECT EMISSIONS (Scope 1)** | **18,945,401** | **18,421,636** | **339,872** | **30,063** | **150,713** | **3,111** | **6** |
| From Electricity Power Generation (fossil combustion to produce electricity) | 17,871,012 | 17,831,552 | 13,095 | 26,366 | 0 | 0 | 0 |
| Other[4] Scope 1 emissions | 1,074,389 | 590,084 | 326,778 | 3,697 | 150,713 | 3,111 | 6 |

| ENERGY INDIRECT EMISSIONS (Scope 2) | |
|---|---|
| **Location based** | **2,841,900** |
| From electricity purchased and consumed from the grid | 559,839 |
| From technical losses on the distribution grid | 2,282,061 |
| **Market based** | **4,754,552** |
| From electricity purchased and consumed from the grid | 920,696 |
| From technical losses on the distribution grid | 3,833,856 |

[4] It includes:
- fuel combustion emissions from: auxiliary engines in nuclear and renewable plants and in distribution sites; transportation of fuels and subproducts on vessels under own operational control; heating systems and canteens in offices; company vehicles
- fugitive emissions from: photovoltaic panels manufacturing ($NF_3$), methane leakages in gas fired power plants ($CH_4$), HFC leakages in thermoelectric and hydropower plants, offices and PV manufacturing site; $SF_6$ leakages in insulating systems for power generation and distribution; biogenic $CH_4$ emissions in hydroelectric basins

| | |
|---|---|
| **OTHER INDIRECT EMISSIONS (SCOPE 3)** | **40,739,317** |
| Cat.1 Purchased goods and service- | 4,570,421 |
| Cat.2 Capital Goods | 4,781,225 |
| Cat.3 Fuel and Energy related activities | 18,600,043 |
| Cat.4 Upstream transportation and distribution | 11,074 |
| Cat.6 Business travel | 18,525 |
| Cat.7 Commuting | 37,996 |
| Cat.11 Natural gas sold in the retail market | 12,720,034 |

| | |
|---|---|
| **TOTAL EMISSIONS (Location Based)** | **62,526,618** |
| **TOTAL EMISSIONS (Market Based)** | **64,439,270** |

| | |
|---|---|
| **$CO_2$ emissions from Biomass** (not included in Scope 1) | 100,483 |

## 4.2. 2022 GHG inventory statement

| 2022 GHGs ($tCO_2e$) | TOTAL | $CO_2$ | $CH_4$ | $N_2O$ | $SF_6$ | HFCs | $NF_3$ |
|---|---|---|---|---|---|---|---|
| **DIRECT EMISSIONS (SCOPE1)** | **43,493,834** | **42,843,475** | **380,391** | **122,313** | **142,528** | **5,122** | **4** |
| From Electricity Power Generation (fossil combustion to produce electricity) | 42,552,748 | 42,380,228 | 51,882 | 120,638 | 0 | 0 | 0 |
| Other[5] Scope 1 emissions | 941,086 | 463,247 | 328,510 | 1,675 | 142,528 | 5,122 | 4 |
| **ENERGY INDIRECT EMISSIONS (SCOPE2)** | | | | | | | |
| **Location based** | **3,658,532** | | | | | | |
| From electricity purchased and consumed from the grid | 775,837 | | | | | | |
| From technical losses on the distribution grid | 2,882,695 | | | | | | |
| **Market based** | **4,946,613** | | | | | | |
| From electricity purchased and consumed from the grid | 1,019,117 | | | | | | |
| From technical losses on the distribution grid | 3,927,496 | | | | | | |
| **OTHER INDIRECT EMISSIONS (SCOPE3)** | **69,976,944** | | | | | | |
| Cat.1 Purchased goods and service- | 6,396,561 | | | | | | |
| Cat.2 Capital Goods | 8,014,555 | | | | | | |
| Cat.3 Fuel and Energy related activities | 35,339,578 | | | | | | |
| Cat.4 Upstream transportation and distribution | 9,824 | | | | | | |
| Cat 6 Business travel | 29,894 | | | | | | |
| Cat.7 Commuting | 24,422 | | | | | | |
| Cat.11 Natural gas sold in the retail market | 20,162,109 | | | | | | |
| **TOTAL EMISSIONS (Location Based)** | **117,129,310** | | | | | | |
| **TOTAL EMISSIONS (Market Based)** | **118,417,391** | | | | | | |
| **$CO_2$ emissions from Biomass** (not included in Scope 1) | 114,838 | | | | | | |

[5] It includes:
- fuel combustion emissions from: auxiliary engines in nuclear and renewable plants and in distribution sites; transportation of fuels and subproducts on vessels under own operational control; heating systems and canteens in offices; company vehicles
- fugitive emissions from: photovoltaic panels manufacturing ($NF_3$), methane leakages in gas fired power plants ($CH_4$), HFC leakages in thermoelectric and hydropower plants, offices and PV manufacturing site; $SF_6$ leakages in insulating systems for power generation and distribution; biogenic $CH_4$ emissions in hydroelectric basins.

## 4.3. DNV Verification Statement

# STATEMENT

**DNV Business Assurance (DNV)** has been commissioned by the management of ENEL SpA to carry out an independent verification of:

- its Greenhouse Gas (GHG) emissions Inventory relative to the 2025 Calendar Year
- the recalculation of its GHG Baseline Year (2022 Calendar Year)
- the "Scope 1 GHG emissions intensity related to Power Generation" & "Scope 1 and 3 GHG emissions intensity related to Integrated Power" metrics for 2025 Calendar Year

ENEL SpA has sole responsibility for preparation of the data and external report. DNV, in performing our assurance work, is responsible to the management of ENEL SpA. Our assurance statement, however, represents our independent opinion and is intended to inform all stakeholders including ENEL SpA.

## Verified GHG Emissions ($tCO_{2-eq}$)

| Greenhouse Gas Emissions Scopes | 2025 | 2022 |
|---|---|---|
| Direct (Scope 1) GHG Emissions (*) | 18 945 401 | 43 493 834 |
| Energy Indirect (Scope 2) GHG Emission (Location Based) | 2 841 900 | 3 658 532 |
| Energy Indirect (Scope 2) GHG Emission (Market Based) | 4 754 552 | 4 946 613 |
| Other Indirect (Scope 3) GHG Emissions | 40 739 317 | 69 976 944 |
| $CO_2$ biogenic from biomass combustion (**) | 100 483 | 114 838 |

(*) it includes $CH_4$ and $N_2O$ biogenic emissions

(**) direct $CO_2$ biogenic emissions are reported separately as per §4 of The GHG Protocol

## Verified GHG Intensity Metrics ($gCO_{2-eq}/KWh$)

| Metrics (***) | 2025 |
|---|---|
| Scope 1 GHG emissions intensity related to Power Generation | 97 |
| Scope 1 and 3 GHG emissions intensity related to Integrated Power | 108 |

(***) Metrics definitions can be found in the annex of this statement.

## Assurance Opinion

Based on the verification process conducted by DNV as explained in the annex of this statement:

- we provide a reasonable assurance of Scope 1, Scope 2 GHG emissions *as* DNV found them to be
  - materially correct;
  - a fair representation of GHG emissions information; and
  - in accordance with the Verification Criteria
- we provide a limited assurance of the Scope 3 GHG Emissions as DNV found no evidence showing them to be
  - not materially correct;
  - not a fair representation of GHG emissions information; and
  - not in accordance with the Verification Criteria

**DNV Business Assurance USA, Inc.**

***31 March 2026***

| Lead Verifier | Technical Reviewer | Approver |
|---|---|---|
| **Francisco Zamarron** | **Piergiorgio Moretti** | **Shruthi Bachamanda** |

Bachamanda, Shruthi Poonacha — Digitally signed by Bachamanda, Shruthi Poonacha Date: 2026.03.30 13:06:00 -04'00'

ANAB — ANSI National Accreditation Board — ACCREDITED — ISO 14065 — VERIFICATION BODY

# STATEMENT ANNEX

## Verification Objective

To assess conformance with applicable verification criteria, including the principles and requirements of relevant standards or GHG programmes within the scope of the verification of: 1) the organization's GHG emissions inventory as reported in the external GHG Inventory Report entitled "2025 GHG Inventory - Quantification and Reporting of greenhouse gas emissions in accordance with the Corporate GHG Protocol" rev. 31 March 2026; 2) any significant changes in the organization's GHG inventory since the last reporting period; and 3) the organization's GHG-related controls.

## Verification Scope

- The organizational boundaries defined by the legal entities of the ENEL group described in this Annex.
- Direct (Scope 1) GHG emissions from the following sources: combustion of fuels in stationary and mobile sources, HFCs leaks from cooling systems, $SF_6$ leaks from generation and distribution systems, $CH_4$ fugitive from hydro-basins and $NF_3$ leaks from solar panel production and other process emissions.
- Indirect (Scope 2) GHG emissions from the following sources: electricity consumption and technical network losses from distribution.
- Other indirect (Scope 3) GHG emissions from relevant activities falling in the following GHG Protocol Categories:
  - Cat. 1 – Purchased goods and services from the supply chain.
  - Cat. 2 – Purchased capital goods from the supply chain.
  - Cat. 3 – Fuel and energy related activities: coal, fuel-oil and natural gas extraction and fuel transport and purchase of electricity to third party producers to be sold in the retail market.
  - Cat. 4 – Transportation of raw materials and waste.
  - Cat. 6 – Business Travel.
  - Cat. 7 – Employee Commuting.
  - Cat. 11 – Use of natural gas sold in the retail market.
- The following greenhouse gases: carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), sulphur hexafluoride ($SF_6$), nitrogen trifluoride ($NF_3$), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).
- The following carbon intensity metrics:
  - "Scope 1 GHG emissions intensity related to Power Generation"- Ratio between the Group Scope 1 GHG emissions (including $CO_2$, $CH_4$ and $N_2O$) from thermal electricity production, expressed in grams of $CO_{2eq}$, and net electricity produced sent to the grid, excluding the electricity produced by hydro-pump storage, expressed in kwh.
  - "Scope 1 and 3 GHG emissions intensity related to Integrated Power" - Ratio between the sum of the Group Scope 1 GHG emissions (including $CO_2$, $CH_4$ and $N_2O$) from thermal electricity production plus the Group Scope 3 GHG emissions from production of purchased electricity sold to end customers, expressed in grams of $CO_{2eq}$, and the sum of the net electricity produced sent to the grid - excluding the electricity produced by hydro-pump storage – and the purchased electricity, expressed in kwh.
- ENEL GHG Inventory for the Reporting Period from 1 January 2025 to 31 December 2025 and the recalculation of the GHG Baseline Year (from 1 January 2022 to 31 December 2022) quantified according to the financial and operational control consolidation approach.

# STATEMENT ANNEX

## Verification Level of Assurance

The verification was conducted by DNV, to a reasonable level of assurance for all Scope 1 and Scope 2 GHG emissions and a limited level of assurance for Scope 3 GHG emissions

## Materiality Level

Errors / omissions which represent, single or aggregated, the 5% of total emissions are considered material.

## Verification Criteria

"The Greenhouse Gas Protocol" and its amendment "GHG Protocol Scope 2 Guidance" issued by the World Business Council for Sustainable Development (WBCSD) and the Word Resources Institute (WRI)

## Verification Protocols

"ISO 14064-3: 2019: Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

## Independence

DNV was not involved in the preparation of any part of ENEL's data or report. We adopt a balanced approach towards all stakeholders when performing our evaluation.

## List of ENEL Legal Entities within the GHG Inventory Boundaries

Enel Italia S.p.A.
Enel Global Trading S.p.A.
Enel Grids S.r.l.s
Enel Iberia, S.R.L.U.
Enel Chile S.A.
Enel Global Services S.R.L.
Enel X S.r.l.
Enel Americas S.A.
Enel North America, Inc.
Enel Innovation Hubs S.R.L.
Enel Green Power S.p.A.

**DNV Business Assurance USA, Inc.**
***31 March 2026***

Lead Verifier
**Francisco Zamarron**

Technical Reviewer
**Piergiorgio Moretti**

Approver
**Shruthi Bachamanda**

Bachamanda, Shruthi Poonacha
Digitally signed by Bachamanda, Shruthi Poonacha
Date: 2026.03.30 13:06:27 -04'00'

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 14065
VERIFICATION BODY

## 4.4. List of Companies within the scope of the inventory

Note: Group companies with thermoelectric, nuclear and renewable energy production plants, photovoltaic panels production, and offices in the countries of operational presence relating to energy production and distribution activities fall within the perimeter.

| **Company** |
| --- |
| Enel Italia S.p.A. |
| Enel Global Trading S.p.A. |
| Enel Grids S.r.l.s |
| Enel Iberia, S.R.L.U. |
| Enel Chile S.A. |
| Enel Global Services S.R.L. |
| Enel X S.r.l. |
| Enel Américas S.A. |
| Enel North America, Inc. |
| Enel Innovation Hubs S.R.L. |
| Enel Green Power S.p.A. |