# CARBON FOOTPRINT

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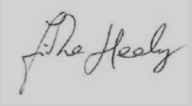
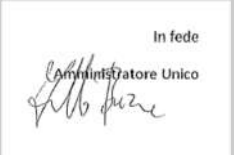
| Signature  | Signature | Signature   |

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## 0. PREMISE

This assessment provides FORNOVO GAS S.p.A. (hereinafter FORNOVO GAS), and the interested parties with whom it will be shared, with a detailed report of the *carbon footprint* associated with the activities of the production site at via Ponticelli, 5/7 - 43029 Traversetolo (PR) for the year 2024.

FORNOVO GAS commissioned an expert consultant (INGFOR) to calculate the greenhouse gas emissions generated by its activities. This document has therefore been drawn up following an internal and external review of documentation pertaining to production and related activities, of interviews with personnel and the analysis of original data and data organised in databases.

This document updates the *Carbon Footprint* of FORNOVO GAS by establishing a reference level of emissions (*baseline*) against which FORNOVO GAS intends to measure the improvement in terms of reductions to be achieved through the activation of specific and targeted interventions.

All data collected in this document were selected and analysed following the principles of the *GHG Protocol Corporate Accounting and Reporting Standard* (GHG Protocol) published by the *World Resources Institute* (WRI, 2023) in particular: relevance, completeness, consistency, transparency and accuracy. In addition, the international standard ISO 14064-1:2019, which defines requirements at the organisation level for quantification and reporting of greenhouse gas emissions and removals (ISO, 2019), applies.

In order to document its commitment to environmental protection, FORNOVO GAS has been operating under an ISO 14001 certified environmental management system since 2009. The Carbon Footprint assessment is intended to demonstrate compliance with the amendment published by the ISO committee in February 2024 (ISO 14001:2015/Amd 1:2024), which requires the integration of climate change issues into the organisation's context analysis. In this assessment, Fornovo Gas identifies a tool to determine the environmental impact of its activities on the climate, in order to set a target for the reduction of greenhouse gas emissions to be pursued in the following period, taking into account European and national commitments in this regard. The results of the Carbon Footprint assessment are then integrated into the environmental management system documentation.

This study is the second Carbon Footprint Assessment that has been prepared for the organisation. Where appropriate, a separate document will be prepared to compare the results of the previous assessment covering the year 2024 with the results of this study to begin to draw a trend line for GHG emissions. In addition, a GHG emission reduction plan is included, which also quantifies the expected results of the GHG emission reduction projects that Fornovo Gas intends to implement in 2025.

# 1. INTRODUCTION

This assessment study of the *Carbon Footprint* associated with greenhouse gas emissions (i.e., GHG emissions) from FORNOVO GAS activities has a twofold goal. On one hand, it is intended to provide, on a voluntary basis, truthful and transparent information to the interested parties; and on the other, within the reporting process, it is intended to improve the understanding, also on an internal level, of the relative importance of GHG emissions and how reduction targets can be set to mitigate environmental impacts on climate.

*INTRODUCING THE COMPANY*

When FORNOVO GAS was established, in 1969, the transport of high-pressure methane gas by road was its main business. During the initial years of trading it expanded to become the industry leader. Subsequently, thanks also to a series of acquisitions of and shareholdings in companies operating in the field of natural gas, (Spem, Thecla, Gre Gas) it began to work successfully in all phases of design, engineering, construction, management and maintenance of its own network of motor vehicle natural gas sales points.

FORNOVO GAS has been operating as a Benefit Company since 2022, integrating in its corporate purpose, in addition to profit objectives, the objective of having a positive impact on society and the biosphere. A Benefit Company is a legal instrument that, through a corporate statute, creates a solid foundation for long-term mission alignment and shared value creation. It therefore makes it possible to protect the mission in the event of capital increases and changes in management, to create greater flexibility in the evaluation of sales potential and to maintain the mission even in the event of generational changes or a stock exchange listing. The choice made by FORNOVO GAS gives continuity, strength and structure to a vocation that has always guided its approach towards people, the environment, customers and the community.

Nowadays, thanks to a product range that spans from compression systems for industrial (process) applications to distribution systems (compressors and natural gas delivery units) for automotive use, FORNOVO GAS is able to provide its customers with turnkey solutions. More information on the company's background is available at https://www.fornovogas.it/.


*Figure 1 Fornovo Gas S.p.A. Facility in Traversetolo (PR)*

The products are designed, assembled and tested entirely in-house, except when there is a large number of customer requests for supplies, in which case the company uses a qualified sub-contractor to carry out the assembly operations. Products are divided into three macro-types:

- Biogas and biomethane - FORNOVO GAS provides products throughout the Green Energy value chain. In the fermentation basin, biomass is treated to obtain raw Biogas. Then, by means of a low-pressure compressor, the Biogas is conveyed to the Upgrading system. After the Biogas has been converted into Biomethane, we supply high-performance compressors for high pressures, including *oil-free*, which are essential for:
  - Injecting Biomethane into the grid.
  - Liquefying Biomethane (LBG).
  - Storing Biomethane.
  - Distributing Biomethane.
- Industrial compressors - include compressors designed for a variety of industrial applications, such as energy cogeneration and gas turbine power supply. Customers include both EPC - Engineering, Procurement, Construction - companies, that handle the installation from designing to testing, and Engineering companies. FORNOVO GAS supplies compressors, skids and cabinets for many sectors: refineries, petrochemical plants and production plants for the liquefaction of methane, called LNG and for numerous applications in the Upstream and Downstream processes. In particular, the company offers a complete range of oil-free cylinder compressors, both low and high pressure. In the LNG sector, this technology protects the liquefaction plant and ensures optimal operation by eliminating the risk of contamination of the biomethane with oil.

- CNG (compressed natural gas) compressors - compressors in road and motorway CNG refuelling plants for motor vehicles, or for large passenger or goods transport companies, logistics companies, or small plants for private individuals. When it comes to CNG, compressors are indispensable for:
  - Compressing gas at high pressures.
  - Distributing gas through top-quality and safe systems.
  - Ensuring that the gas has a high level of purity.

Warranty service for customers is provided directly by the company. Throughout its activity, it has also been active abroad with feasibility studies subsidised by both the EU and private organisations.

Fornovo Gas S.p.A. currently operates from a single site where both its registered office and operational headquarters are located, i.e. via Ponticelli, 5/7 - 43029 Traversetolo (PR).

*PRODUCTION STAGES*

The company's activities at the site are as follows:

- Design activity,
- Acceptance checks on materials procurement,
- Assembly of compressor bodies, delivery units, skid-mounted compressors, compressor units and natural gas distribution,
- Storage of mechanical/electronic components,
- Documentary and operational management of manufacturing activities (offices),
- Commercial activities (office and off-site),
- Functional testing with $N_2$ in the manufactured units, and
- Customer support (off-site).

The relationships between the production stages are illustrated in the following figure.

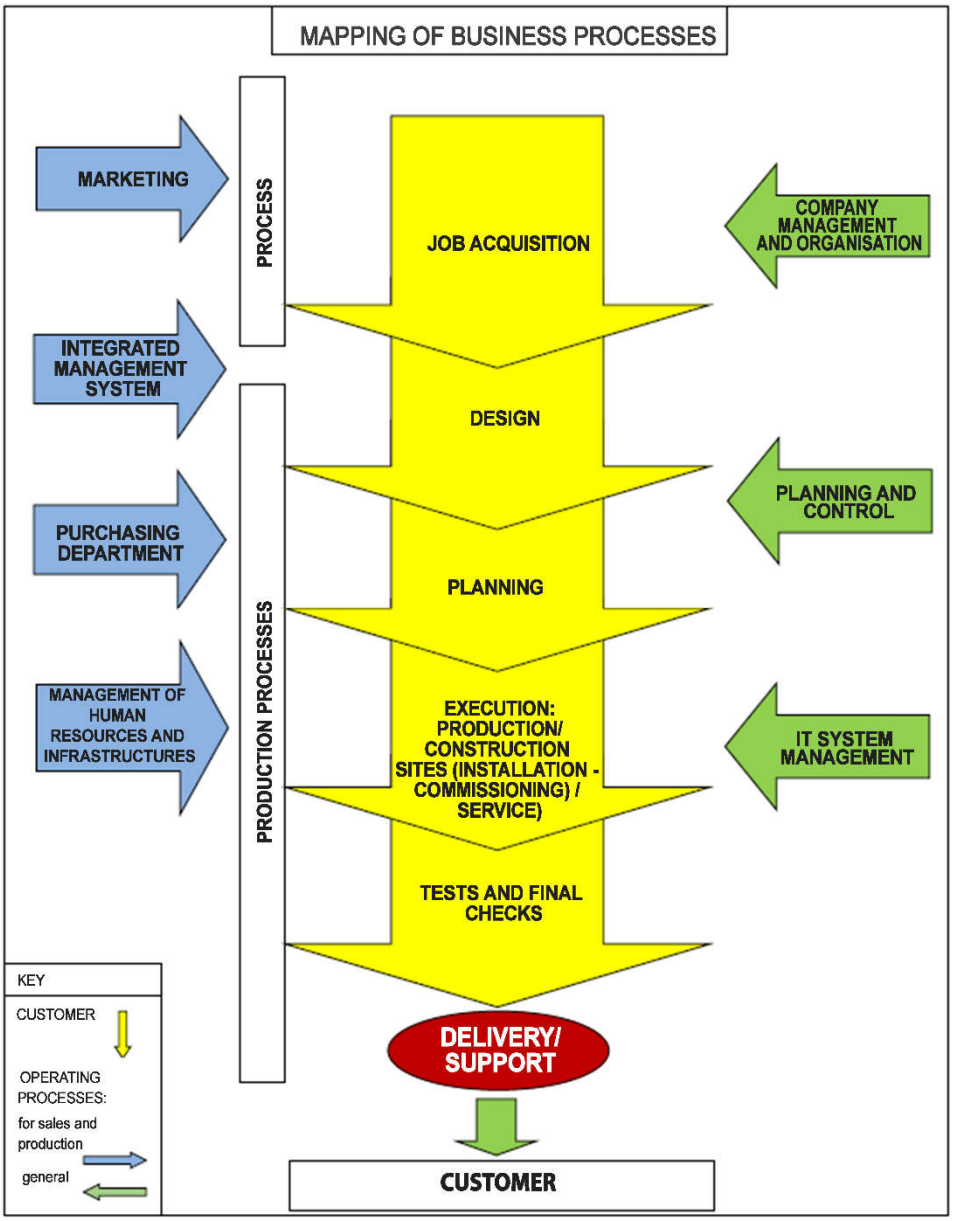



*Figure 2 Operational Flow of FORNOVO GAS S.p.A.'s Activities*

## 2. REGULATORY REFERENCES

*CURRENT REGULATIONS*

Currently, there is no applicable legislative requirement to assess the *Carbon Footprint* of FORNOVO GAS. However, the evidence of ongoing climate change, requests for information from customers who are sensitive to the issue, and the evolution of recent legislation at both European and national levels, point to the need to assess the GHG emissions from business activities in preparation for a not too distant future when minimising such emissions may become not only a legal requirement but certainly an imperative social obligation.

In this regard, we take note of the European climate legislation (Regulation (EU) 2021/1119) that sets the goal of attaining climate neutrality, i.e., achieving a balance between emissions and removals of greenhouse gases throughout the Union, leading to zero net emissions by 2050. The same regulation defines an intermediate target to reduce GHG emissions by 55%, compared to 1990, by 2030.

According to Art. 7 of Directive 27/2012/EC (EED), Italy has a target to achieve by 2030 a cumulative energy savings of 51.4 Mtoe (in terms of final consumption) by 2021-2030 measures. Italy published the *Integrated National Energy and Climate Plan* or INECP (MASE, 2023), which sets out strategies for achieving the targets at national level. The INECP envisages 5 lines of action, which will be developed in an integrated manner:

1. Decarbonisation;
2. Energy efficiency;
3. Energy security
4. Development of the internal energy market,
5. Research, Innovation and Competitiveness.

The following figure illustrates the strategic planning and interventions that according to the INECP can lead to the achievement of the goal.

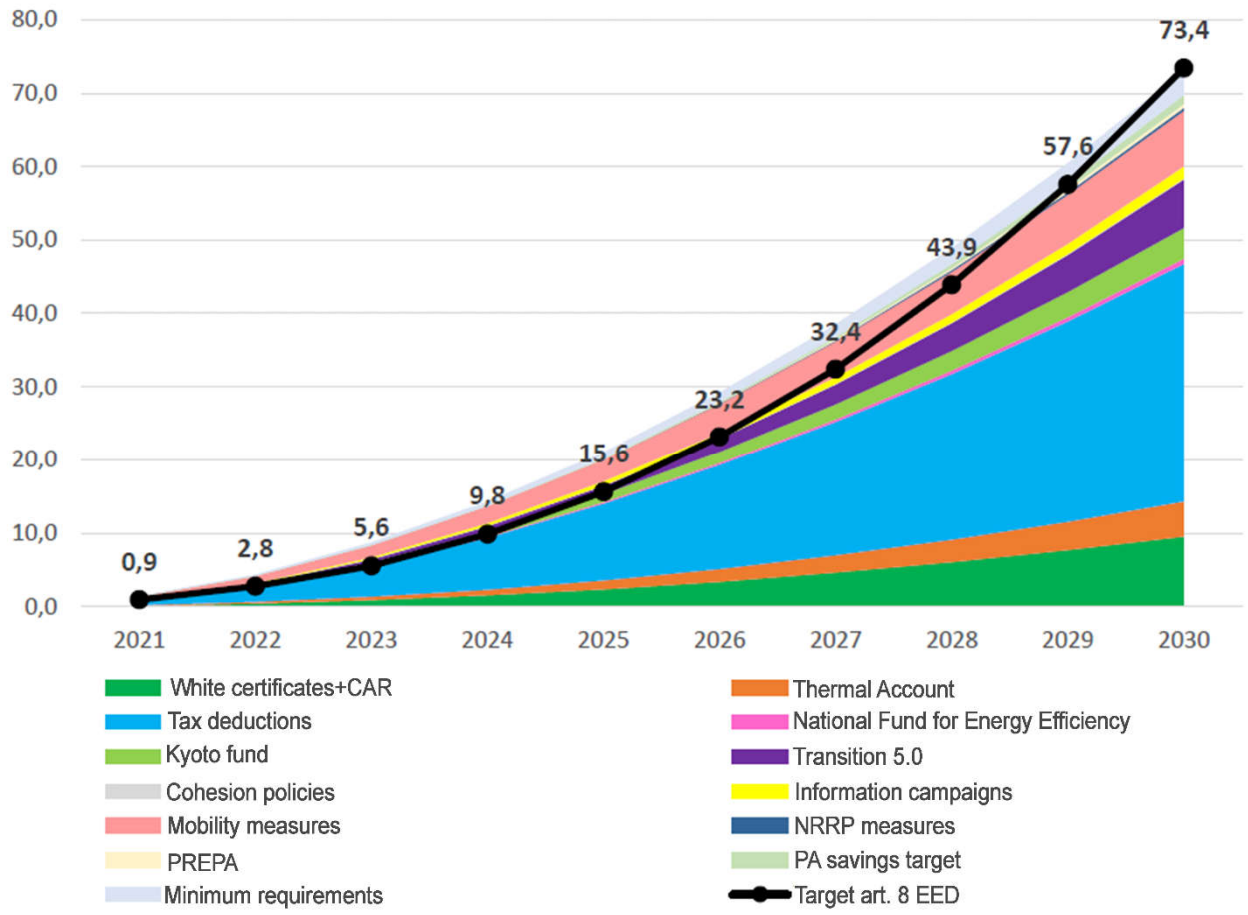



*Figure 3 National strategy for achieving the GHG emissions reduction target (source MASE: https://www.mase.gov.it/sites/default/files/PNIEC_2023.pdf)*

It can be seen that for sustainable mobility, a major sector for FORNOVO GAS products, an important increase is expected in the coming years.

On 15 September 2023, European Regulation 2023/1773 came into force, implementing what was introduced in May by Regulation (EU) 2023/956: the CBAM, Carbon Border Adjustment Mechanism. The new standard aims to protect the competitiveness of manufacturing companies in carbon-intensive sectors in Europe.

The new 'Carbon Border Adjustment Mechanism' (CBAM) is a new environmental tax on European companies importing products with significant emissions of carbon dioxide and other greenhouse gases. The types of carbon-intensive products covered by the CBAM to date are:

- cement and cement products;
- electricity;

- fertilisers;
- cast iron, iron and steel products;
- aluminium and aluminium products;
- hydrogen.

Therefore, as of 1st October, all European companies importing goods such as those listed above must comply with the measures set out in the CBAM Regulation for the transitional period of entry into force and meet as soon as possible the new requirements in terms of:

- monitoring;
- reporting;
- reporting of $CO_2$ and/or $CO_2$ equivalent emissions incorporated in imported goods.

*VOLUNTARY LEGISLATION*

ISO standards are the end result of a process that allows scientific knowledge to be translated into technical standards at an international level which can be implemented into regional climate change regulatory tools.

ISO standards related to GHG gases are based on the quantification, monitoring, reporting and verification of GHG emissions and/or removals and can be applied to public or private organisations, processes and products; in particular, the reference standards are those referring to the ISO 14060 family.

*The ISO 14064 family of standards*

The use of the ISO 14064 family of standards allows to:

1. design and manage GHG inventories at the organisation level;
2. design and manage emission reduction/removal enhancements;
3. provide the basic requirements and principles for the bodies that validate and verify the declared data.

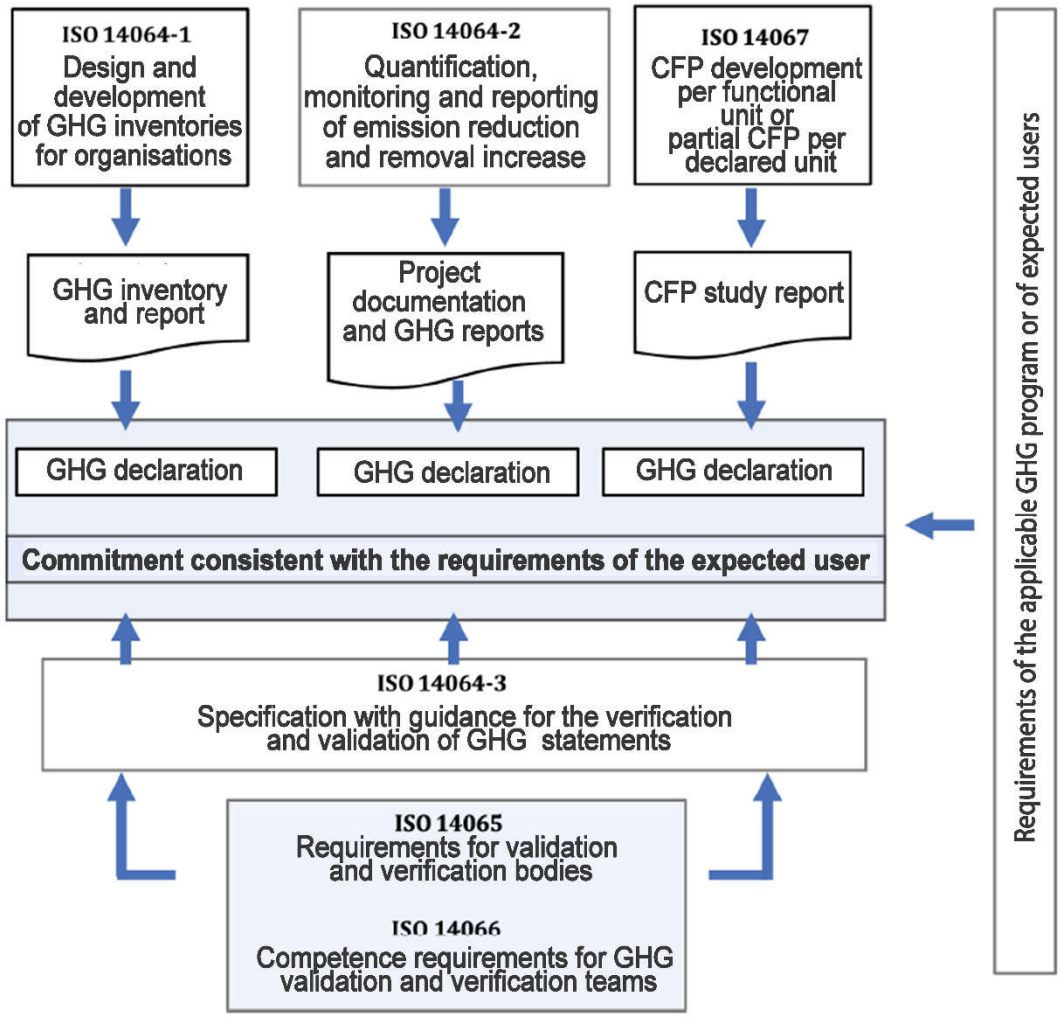
**ISO 14064-1** describes the principles and requirements for designing, developing, managing and reporting on an organisation's GHG inventories. It defines the criteria for setting GHG emission and removal limits, quantifies GHG emissions and removals, and enables the identification of company-specific actions or activities to improve GHG management. It also includes requirements

and guidance on inventory quality management, reporting, internal review (audit) and the organisation's responsibilities in verification activities.

**ISO 14064-2** specifies the principles and requirements for determining the baselines needed to monitor, quantify and report a project's emissions. The standard focuses on projects that aim at reducing GHG emissions (e.g. energy efficiency) or increasing removal (e.g. reforestation). It provides principles and requirements for determining the project baseline and for monitoring, quantifying and reporting on performance.

**ISO 14064-3** specifies requirements for the verification of GHG statements related to inventories, projects and product carbon footprints. It describes verification or validation processes, including their planning, the procedures for evaluating the GHG statements of organisations, as well as the projects and products. This standard can be used by organisations or independent third parties involved in verification and certification processes.

The following figure illustrates the relationship between the standards of the ISO 14060 family, and how they work together to help organisations assess and improve their GHG




emissions.

*Figure 4 Relationship between the ISO 14060 family of GHG standards*

## 3. DEFINITIONS

Unless otherwise indicated, the following definitions are taken from the international standard UNI EN ISO 14064-1: 2019 *Greenhouse gases - Part 1: Specification with guidance at the organisation level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.*

- **Greenhouse gases; GHG:** Gaseous constituent of the atmosphere that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted from the earth's surface, atmosphere and clouds.
- **Materiality**: Information is considered material, and therefore important to include, if its inclusion or exclusion could be perceived as influencing the decisions or actions of the parties concerned. As a rule of thumb, an error is considered to be materially misleading if its value exceeds 5% of the total inventory for the part of the organisation being verified (WRI, 2023).
- **Greenhouse gas emission; GHG emission**: Release of a GHG into the atmosphere.
- **Source of greenhouse gases; source of GHG**: A process that releases GHG into the atmosphere.
- **Global Warming Potential (GWP)**: The various gases that can have a global warming effect interact with the atmosphere in different ways, depending on the chemical properties of the specific gas. To assess this effect in order to compare different gases and derive an overall effect, reference is made to the value attributed to the specific gas, referred to as the Global Warming Potential or GWP. Basically, the values represent a scale where conventionally $CO_2$ has a global warming potential of 1 and other GHGs are given a value in reference to the effect of an equivalent amount of $CO_2$. The Convention takes into account a 100-year time horizon (i.e. GWP 100) identified by the IPCC in their most recent report, for each emission category and for each gas assessed.
- **$CO_2$ Equivalent ($CO_2eq$)**: The amount of $CO_2$ equivalent emissions, written as $CO_{2eq}$, is the benchmark for comparing and reporting emissions of different greenhouse gases and is calculated by multiplying the global warming potential attributed to each gas by the weight of the gas emitted. For instance, the emission of 1 tonne of methane, a gas with a GWP value of 28, is considered equivalent to the release of 28 tonnes of $CO_2$, i.e. 28 tonnes $CO_{2e}$.

- **Emission factors**: An emission factor is used to calculate GHG emissions from a specific source and gas in relation to the activity under consideration. Emission factors reflect average values by sector, technology type, and/or fuel type. It is therefore important to select emission factors that are as appropriate as possible to the specific context and from authoritative and reliable sources.
- **Activity data**: Activity data is a key input for calculating GHG emissions and consists of data related to the activity that generates GHG emissions, such as the amount of diesel used in company cars. These activity data are collected in physical units, for example, litres of diesel fuel for a given period, then multiplied by the emission factors for each gas and then by the relevant greenhouse gas GWP value to calculate the amount of GHG in tonnes of $CO_{2e}$.

## 4. GHG INVENTORY BOUNDARIES

*ORGANISATIONAL BOUNDARIES*

In the context of GHG emissions reporting, two different approaches can be applied: one, based on equitable allocation, that is the *equity* share owned, or alternatively another based on the control exercised by the organisation. The Control-Based Approach requires reporting 100 per cent of GHG emissions from activities that are under the organisation's control, excluding GHG emissions deriving from those activities in which the organisation has a financial share without exercising control. Control can be defined as financial or operational. In the case of FORNOVO GAS, the choice of basing GHG emissions reporting on operational control allows to include emissions from certain activities from supplying companies in which the company does not hold a financial interest but over which it can exercise control on activities carried out on its behalf.

In the Operational Control Approach, the organisation must accounts for 100 percent of emissions over which it has operational control. This does not necessarily mean that the company has the decision-making power in every case concerning an activity, e.g. with regard to investments; but it must have the power to establish and implement operational procedures. For FORNOVO GAS, for instance, operational control can be defined as that which it exercises over suppliers operating at the production site.

The reporting of GHG emissions from the organisation's controlled activities includes the recognition and collection of data related to specific activities, sites, geographic locations, business processes and properties. Therefore, the application of the organisational and operational control boundary was preferred in this case, as this approach better mirrors the GHG emissions actually associated with the company's activities. This study applies to the single production site of via B. Ponticelli, 5-7, in the municipality of Traversetolo in the province of Parma.

*REPORTING BOUNDARIES*

*Direct GHG emissions and removals: Scope 1*

The reporting boundaries applicable to this study include direct greenhouse gas emissions, following the methodology of the *GHG Protocol* (WRI, 2023) to transform consumption data into the 6 types of greenhouse gases identified by the Kyoto Protocol, where applicable:

a. Carbon dioxide ($CO_2$)

b. Methane ($CH_4$)

c. Nitrous oxide ($N_2O$)

d. Hydrofluorocarbons (HFCs)

e. Perfluorocarbons (PFCs)

f. Sulphur hexafluoride ($SF_6$).

It should be noted that there are no Nitrogen Trifluoride ($NF_3$) emissions, another GHG gas that the standard requires to be reported, associated with the direct activities under study and thus they do not apply to this study.

The data collected will be used to quantify emissions separately for each gas or group of gases then converted to tonnes of $CO_{2e}$ by applying appropriate emission factors.

The direct activities that were evaluated for this study are as follows:

- Cooling (leakage from installations containing greenhouse gases),
- Heating,
- Internal transport (fuel use in forklifts);
- Business trips;
- Service trips;
- Direct transport, using owned vans.

There are currently no GHG removal projects operated by FORNOVO GAS. However, the methodology of the SimaPro software, as indicated above, allows for the inclusion of natural $CO_2$ removals (from plants, water bodies) averaged, although the quantities are low, for the processes evaluated here.

*Direct GHG emissions and removals: Scope 2*

The project to install a 252 kWp photovoltaic system was completed in 2024 and the electricity produced by the system was available in the second half of the year (see Table 3 below). The system is expected to produce up to 320 MWh of renewable electricity per year, some of which will be sold to the grid (around 54%, taking into account the increased electricity production during the summer months, when the site's demand is lower) and the rest will be consumed on site (around 46% of the energy produced, or 52% of the demand using the year 2022 as reference).

*Other indirect GHG emissions*

In assessing the indirect emissions to be taken into account in the GHG emissions inventory, FORNOVO GAS applied the following indirect emissions materiality criteria:

- Amount (in tonnes of $CO_2$ equivalent);
- Influence level on sources/absorbers;
- Access to information;
- Level of accuracy of the data to be collected.

Please note that for raw materials consisting of components purchased from distributors, no reliable data is available on 'embedded' GHG emissions, i.e. those emitted during production processes. Furthermore, FORNOVO GAS has no operational control over these processes. Similarly for product usage, FORNOVO GAS compressors, there is no data on installations, load factors or usage factors on which to base emission estimates for these activities. Again, FORNOVO GAS has no operational control over the use of its products. For these reasons, it was not possible to estimate the GHG emissions associated with the use of compressors.

This study takes into account the quantifiable indirect GHG emissions that are listed in the *GHG Inventory FORNOVO GAS 2024* (Annex A).

## 5. METHODOLOGY

This study was prepared according to ISO 14064-1 (ISO, 2019). In addition, the requirements of the *GHG Protocol Corporate Accounting and Reporting Standard* (WRI, 2023) were taken into account. This standard has been developed with the following goals:

- Helping organisations prepare a greenhouse gas emissions inventory that represents accurate reporting of their emissions through the application of standardised approaches and principles;
- Simplify and reduce the costs of GHG emission inventory preparation;
- Provide organisations with information that can be used in building an effective strategy to manage and reduce GHG emissions;
- Increase consistency and transparency in GHG emissions reporting and publication of results between different organisations and GHG programmes.

To determine the emission factors for the use of electricity and natural gas for combustion, the company made use of the *SimaPro 9.5.0.0* software, using the *ecoinvent 3.9.1* database (January 2023) supplemented where necessary by the *Industry data 2.0* database (March 2023) and the *IPCC 2021 GWP 100 (incl. $CO_2$ uptake) V1.02* methodology. This methodology is based on the *IPCC 2013* method developed by the *Intergovernmental Panel on Climate Change*. It contains the emission factors called *Global Warming Potential* (*GWP*) as defined by the IPCC with a 100-year time horizon. These emission factors are recommended by UNEP-GLAM (2017). It should be noted that the IPCC 2021 version of the methodology includes both an estimate of $CO_2$ removal and biogenic emissions in the processes evaluated. Where applicable, results are presented by category, as well as total GHG emissions. The categories evaluated are as follows:

- GWP100 - fossil,
- GWP100 - biogenic,
- GWP100 - $CO_2$ removal, and
- GWP100 - land transformation.

Therefore, for natural gas emissions the applicable algorithm is as follows:

$$tCO_2and\ (gas) = \sum Scm\ natural\ gas \times UCV\ \times EF\ )$$

Where

- **Scm natural gas** is the amount of natural gas consumed by FORNOVO GAS during the year, based on smart meter billing data,
- **HCV** is the Higher Calorific Value, applying the average value for the year 2022 reported by SNAM (SNAM, 2024) equal to 38.1 MJ/Scm and
- **EF** is the emission factor applied, in this case in the SimaPro software.

The applicable algorithm for emissions from electricity production is as follows:

$$tCO_2and\ (gas) = \sum kWh \times\ 3.6 \times EF\ )$$

Where

- **kWh** is the amount of electricity consumed by FORNOVO GAS during the year, based on *smart meter* billing data,
- **3.6** is the conversion factor from kWh to MJ (by definition) and
- **EF** is the emission factor applied, in this case in the SimaPro software

Where it is not appropriate to use the SimaPro software, such as in the case of GHG emissions from transport due to data update issues, the GWP100 values given in the IPCC Fifth Assessment Report, summarised in the document *Global Warming Potential* (GHG, 2016), have been used to calculate $CO_2$ equivalents, using the most recent emission factors for the relevant gases ($CO_2$, $CH_4$ and $N_2O$) published by the European Environment Agency (EEA) in the form of the *EMEP/EEA air pollutant emission inventory guidebook 2023* (EMEP/EEA, 2023). This calculation involves converting those fuels for which the billing data are in litres, i.e. for diesel and petrol, into kilograms. The conversion factors applied were derived from ENI's technical documents (ENI, 2023a; ENI, 2023b):

- for petrol, the specification requires a density between 0.720 and 0.775 kg/l, and an average density of 0.75 kg/l was applied;
- for diesel, the specification requires a density between 0.820 and 0.845 kg/l, and an average density of 0.83 kg/l was applied;
- for methane gas, an average density in the liquid state of 0.41 kg/l was applied.

*DATA VALIDITY*

The origin and reliability of the data used in this study for scope 1 and scope 2 activities is outlined in the below table (Table 1). It is clear that fuel, natural gas and electricity consumption data are derived from sources subject to the legislation applicable to fiscal meters and therefore subject to periodic verification by authorised and accredited bodies.

| Direct and Indirect Activities (Scope 1 and 2) | Data source | Reference standard for instrument calibration | Instrument error | Reliability |
|---|---|---|---|---|
| **Heating** | Fiscal meter | MID Directive (Annex MI-002) | 0.5/1% | High |
| **Cooling** | Calibrated instrument | UNI ISO 10012-2; UNI EN ISO 16664:2017; UNI EN ISO 6141:2020 | 3g/year | High |
| **Business trips / Service trips / Direct transport** | Fiscal Counters (Service Stations | MID Directive (Annex MI-005) | 0.5% | High |
| | Mileage registration (manual) | EC Regulation No. 39/2010 | 0.5% | Average |
| **Electricity usage** | Fiscal meter | MID Directive (Annex MI-003) | 0.5% | High |

Table 1 Assessment of data for Scope 1 and Scope 2 activities

## 6. EMISSIONS FRAMEWORK

GHG emissions at the FORNOVO GAS level have been divided into the following categories according to the reference standard ISO 14064-1:2019:

a) direct GHG emissions and removals;

b) indirect GHG emissions from imported energy;

c) indirect GHG emissions from transport;

d) indirect GHG emissions from products used by the organisation;

e) indirect GHG emissions associated with the use of products from the organisation;

f) indirect GHG emissions from other sources.

FORNOVO GAS documented the categories separately at installation level in the document *GHG Inventory FORNOVO GAS 2024*, attached to this study (Annex A).

GHG emissions were further divided into sub-categories consistent with the categories listed above on the *Results by Gas Type 2024* sheet in the same annex.

## 7. EMISSION INVENTORY

The emission inventory for the reference year 2024 is shown in the file *GHG Inventory FORNOVO GAS 2024*, below, as Annex A.

## 8. RESULTS

Emissions from direct activities, referred to as Scope 1, are reported here, together with the emissions from imported energy (electricity), which are identified as Scope 2 in the *GHG Protocol Corporate Accounting and Reporting Standard* (WRI, 2023).

Examination of the results shows that:

- emissions from electricity use are still dominant, although there was a 24% reduction compared to 2023. This is the result of the installation and putting into operation of the photovoltaic system in the year 2024.
- heating activity produces about half as many emissions as electricity.
- The use of fuels produces emissions very similar to the previous year (a total of 120 $tCO_2eq$ in 2024 compared to 121 in 2023).
- In 2024, FORNOVO GAS purchased third-party certified sustainability credits to offset 150 $tCO_2eq$ of its emissions.
- As a result, the net emissions, i.e. the balance between Scope 1 and 2 emissions and credits, is **126 $tCO_2eq$**.

It should be noted that, while for the GHG Protocol the internal transport activity is to be considered a direct activity, for the other reference standard, ISO 14064-1, it is to be considered an indirect activity deriving from products used by the organisation (according to point 5.2.4 of the standard).

The results of the calculations described in this study are summarised in the

Table 2 below.

| Emission category (ISO 14064-1, p. 5.2.4) | PLANT/PROCESS STAGE SOURCE OF GHG | Measuring instrument | Total $CO_2$ e emissions ($tCO_2e$) | |
|---|---|---|---|---|
| | | | 2023 | 2024 |
| Direct | COOLING PLANTS (containing greenhouse gases) | Qualified supplier's calibrated instrument | 0 | 0 |
| | INTERNAL TRANSPORT (FORKLIFT) | Seller's fiscal meter | 1 | 1 |
| | THERMAL POWER PLANT/HEATING | Fiscal meter | 69 | 52 |
| | BUSINESS TRIPS | Fiscal meter (service stations) | 61 | 68 |
| | SERVICE TRIPS | Fiscal meter (service stations) | 41 | 34 |
| | DIRECT TRANSPORT | Fiscal meter (service stations) | 19 | 18 |
| Indirect from imported energy | Electricity | Fiscal meter | 135 | 103 |
| **Total from all direct sources and electricity (Scope 1 and Scope 2)** | | | **312** | **276** |
| **Sustainability credits** | | | **0** | **(150)** |
| **Net emissions in 2024** | | | **312** | **126** |

Table 2 Summary of activities and results in terms of $Co_{2eq}$ emissions

To further illustrate the results, a pie chart showing the percentages contributed by each Scope 1 and Scope 2 activity is presented in the below Figure 5.

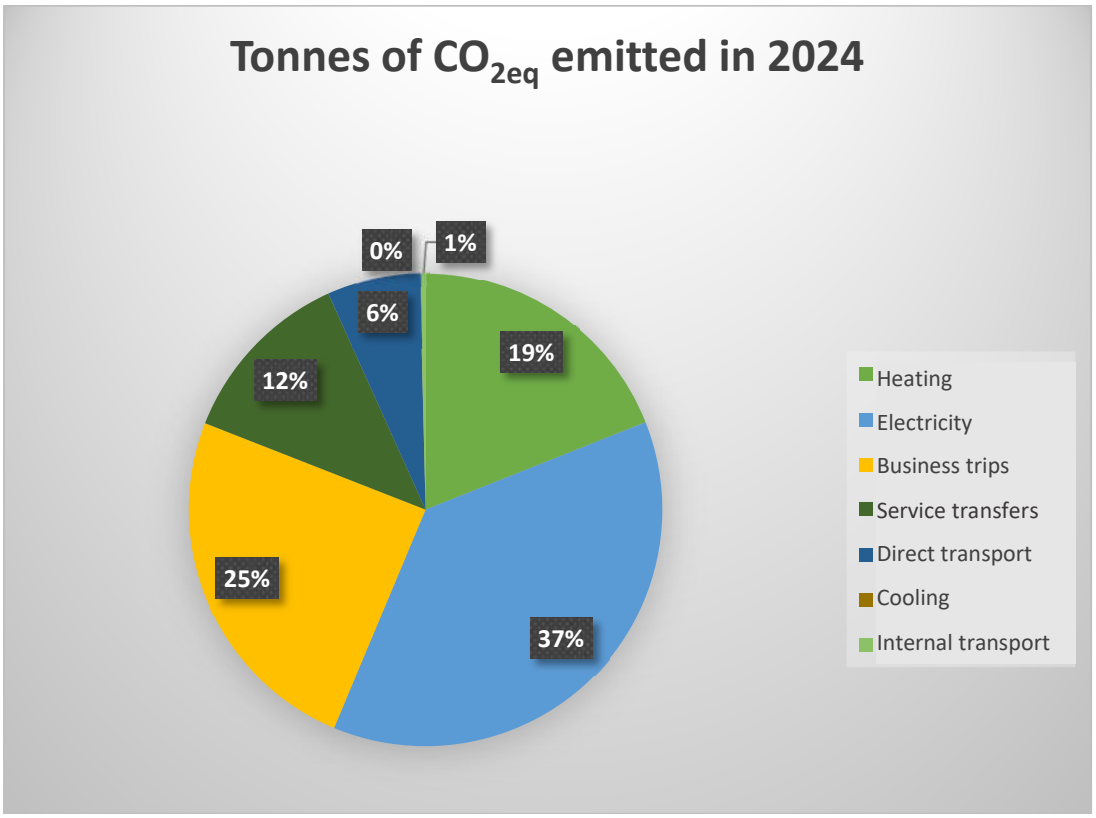



*Figure 5 Diagram of carbon footprint assessment results for Scope 1 and Scope 2*

The assessment of the other indirect activities that can be configured as Scope 3 according to the Protocol led to the identification of minor contributions from those activities that, as reliable data is available, could be subject to calculation. For example, GHG emissions from waste transport could be calculated on the basis of data on types, quantities and recipients (see Annex A). However, it is likely that the contributions to GHG emissions from raw materials or product use (compressors) are much higher than those from direct activities or electricity use. It was not possible to estimate these emissions in this study due to a lack of data and control.

On the basis of the above data, a plan has been drawn up that includes mitigation projects to be completed by 2025, aimed at reducing GHG emissions associated with the activities of FORNOVO GAS (see Table 3).

*Table 3: GHG emission reduction plan for the year 2025*

| 2025 GHG EMISSION REDUCTION PLAN | | | | | |
|---|---|---|---|---|---|
| **Project** | **GHG source** | **Expected result** | **Methods for assessing the result** | **Person in charge** | **Expiry date** |
| **Own consumption from 252 kWp photovoltaic system** | Electricity | Reduction of emissions from electricity by an estimated annual production of approximately 320 MWh (for direct use and for transfer to the grid) | Dedicated meter | EMSM | December 2025 |
| **Electricity from the national grid produced from renewable energy sources** | Electricity | Elimination of residual emissions from electricity (national grid) | Dedicated meter | EMSM | December 2025 |
| **Offsetting of emissions through the purchase of sustainability credits** | All other emission sources | Reduction of emissions from fuels (Scope 1) | Valid certificates from third-parties | EMSM | December 2025 |

## 9. CONCLUSIONS

The assessment of emissions from Scope 1 and Scope 2 activities shows that:

- the use of electricity from the national grid is the largest contributor to total emissions, totalling approximately 276 $tCO_2eq$, a reduction of 36 $tCO_2eq$ compared to the previous year. This result is linked to the installation of a photovoltaic system for the production of electricity for own use, which has had a significant impact on the quantity and quality of greenhouse gas emissions associated the activities of FORNOVO GAS.
- FORNOVO GAS then purchased certified sustainability credits to offset 150 $tCO_2eq$ of emissions, resulting in a net emissions balance of **126 $tCO_2eq$**, that is approximately 40% of the previous year's emissions.

## 10. ANNEXES

Annex A

Inventario GHG FORNOVO GAS 2024 Rev 11 marzo 2025.xlsx

## 11. REFERENCE DOCUMENTATION

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