

Eni

Eni GHG Emissions Statement
2019

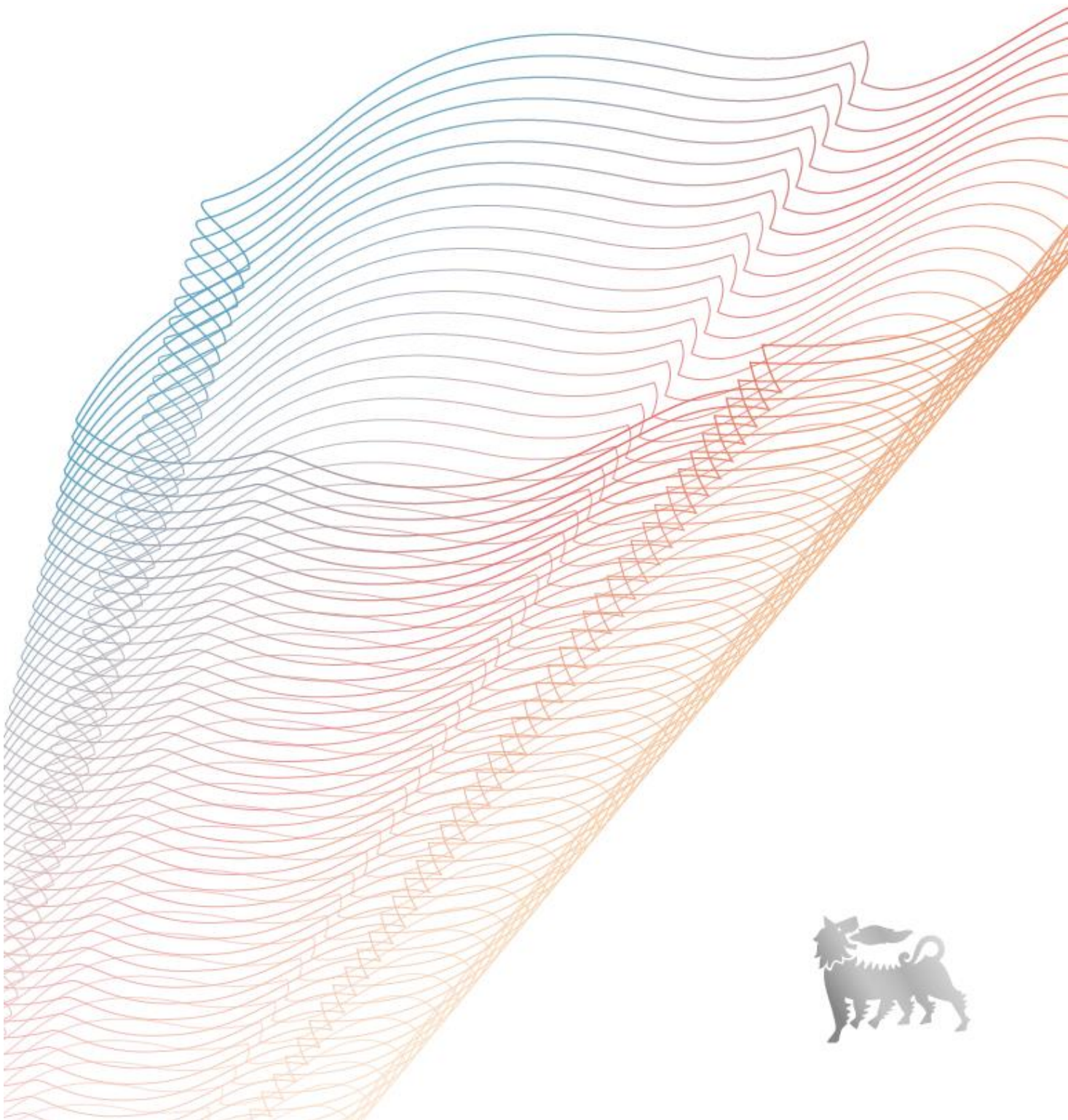


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1. Scope of the Report

This report states direct **Scope 1 GHG emissions, indirect Scope 2 and indirect Scope 3 GHG emissions** from own and value chain operations and activities of Eni SpA and its subsidiaries (hereinafter Eni Group), starting from 01 Jan 2019 until 31 Dec 2019. The report states also the **Lifecycle GHG Emissions Indicators**, namely Net GHG Lifecycle Emissions and Net Carbon Intensity, associated with the long-term decarbonization targets for reporting year 2018 and 2019.

Figures are aligned with the ones stated in Eni's institutional publication, namely the Annual Report 2019 (Consolidated disclosure of non-financial information) and "Eni For - Carbon Neutrality in the Long Term".

Level of assurance: Reasonable (Scope 1, Scope 2); Limited (Scope 3, Lifecycle GHG Emissions Indicators)
Assurance Standard: ISAE 3410

2. Reported GHG and Global Warming Potential

GHG gases considered are: CO₂, CH₄ and N₂O.

Eni has carried out an analysis to assess materiality of others GHG gases (HFCs, PFCs and SF₆) based on available data. The analysis showed that these are not material for Eni as well as for the Oil&Gas industry, as they contribute for less than 1% of the total CO₂+CH₄+N₂O, as stated in the Kyoto protocol.

GWP over 100 years as set by the 4th Assessment Report by IPCC are applied.

As communicated by the European Environment Agency, GWP used in calculations since 2015 are: 25 for Methane and 298 for Nitrous Oxide.

3. Organizational Reporting Boundary

Scope 1, Scope 2, Scope 3

Eni applies to date the operational control approach to set GHG organizational reporting boundary for Scope 1 and Scope 2 emissions.

According to this approach, Eni reports 100% of GHG emissions from assets over which it has operational control, that is where Eni is able to enforce its own policies and procedures, even when it holds less than 100% of the value (for example in a joint venture).

The organizational boundary includes all companies in joint operations, with combined control or connected, where Eni owns the operational control. The inclusion is based on risk a-based clusterization process to define the impact and the materiality of each company in terms of HSE issues, including GHG emissions.

Scope 3 emissions boundary is more heterogeneous, given the variability of emissions categories and the methodology applied, and it is better explained in the dedicated section. For the end-use category, that is the most relevant one, the reference boundary is the upstream equity hydrocarbons production sold.

Lifecycle GHG Emissions Indicators

Regarding the Lifecycle GHG Emissions Indicators, the reference boundary includes lifecycle GHG emissions for all the energy products businesses of Eni, accounted on an equity share basis, in line with financial reporting.

4. Operational Reporting Boundary and limitations

Scope 1, Scope 2, Scope 3

Both Scope 1 and Scope 2 direct and indirect GHG emissions reporting encompasses the operations of all Eni business lines, its Italian and abroad subsidiaries, sites and facilities as listed in the 2019 Annual Report. Reporting of some direct GHG emissions could be not fully comprehensive because potential GHG emissions coming from the following sources could not be fully accounted:

- Minor offices and headquarters buildings
- Minor operations' sites and facilities (commercial companies, storage sites).

The value of GHG emissions not reported has been estimated based on the typical energy consumptions of the interested sources, in order to ensure compliance with the materiality threshold by assessing their relevance.

Some categories (as per GHG Protocol classification) of Scope 3 indirect emissions are not within scope of the assurance engagement, in detail: Category n.8 - Upstream leased assets, Category n.9 - Downstream transportation and distribution, Category n.13 - Downstream leased assets and Category n.15 - Investments.

GHG emissions sources tracked/monitored/reported are classified according to WBCSD/WRI GHG Protocol Initiative Standard and technical standard ISO 14064-1 in direct emissions (Scope 1) and indirect emissions (Scope 2 and Scope 3). In the following paragraph every GHG emission scope is defined and some sources relevant to Eni are identified.

Lifecycle GHG Emissions Indicators

The lifecycle GHG indicators cover all GHG Emissions related to all the energy products managed by Eni, considering their impacts throughout the entire value chain. This approach comprises direct and indirect emissions of Eni's business, including those associated with the end use of energy products. For each energy product, emissions are accounted for all material segment of the value chain, according with a "well to wheel" approach. Therefore, the emissions associated with construction and decommissioning of assets and facilities, purchased goods and services (including capital goods), business travel and employee commuting and waste management are not included in these metrics, as they are assumed not to be material with respect to other contributions

5. GHG Emissions Accounting and Reporting Process

Eni has implemented a process to collect, account and report GHG emissions based on the following pillars:

- Internal procedures have been implemented for the identification of material GHG emission sources and for the identification of common methodologies to calculate GHG emissions at bottom-up level. Methodologies are broadly inspired by WBCSD GHG Protocol, IPIECA O&G Guidance and API Compendium;
- Centralized tools have been implemented in order to ensure a proper calculation of GHG Emissions at bottom-up level. Informative tools are managed by centralized units and 3rd party verified in order to ensure that emissions are estimated with homogenous approaches between subsidiaries, minimizing the risk of errors;
- Specific procedures for data collection is applied consistently with the organizational structure of the Company, identifying clearly role and responsibility and the reporting timeline. Data are collected with a bottom-up approach: GHG operators of sites and facilities within the Eni's operational boundary insert data into Eni's database. Then such inserted data are handled by Central Unit and it is filed on Eni servers, through rules and procedures internal to Eni.
- Quality Assurance/Quality control procedure are applied in order to ensure accuracy and consistency of emissions data. Additional information are collected to ensure data consistency, to track performance and to better explain potential changes in trends and objectives. Finally, Internal auditing are also planned at subsidiary level, covering also GHG emissions data.

6. Scope 1 Emissions

Stated Scope 1 GHG emissions come from sources owned or controlled by Eni Group, including:

- Process and fugitive emissions from "core" and support operations owned or controlled by Eni, including GHG emissions connected with energy generation export to both Eni's and out of boundary sites;
- Emissions from leased assets/operations (leased vehicles fleet).

Scope 1 GHG emissions are classified in the following categories:

Scope 1 Category	Description
Combustion and Process	GHG Emissions from stationary and mobile sources' combustion and from industrial process operations. Gas included are: CO ₂ , CH ₄ , N ₂ O. Upstream GHG emissions from flaring and venting Midstream-Gas and Power GHG emissions from venting are not included in this category, as they are accounted for aside.
GHG Emissions from Flaring	Direct Scope 1 GHG emissions from flaring in oil & gas exploration and production operations. In detail: CO ₂ from flares' combustion and not combusted CH ₄ in flares.
GHG Emissions from venting	GHG emissions from venting in oil & gas exploration and production operations, power generation and gas transportation operations. In detail: CO ₂ and CH ₄ within unburned gases discharged through venting openings.
Fugitives CH ₄ Emissions	Unintentional leaks from plant's equipment like pumps, valves, compressor seals, open end lines, etc.

Main estimation method (that applies across all Eni Group business lines) for the quantification of GHG emissions is based on the formula:

$$\text{eq.1} \quad \text{GHG Emissions} = A * \text{EF} * \text{OF} * \text{GWP}$$

where:

- GHG emissions is the amount of gas (CO₂, CH₄ and N₂O) expressed in metric tonnes of CO₂ equivalent.
- A is Activity data, which measures burned fuel [kg], [m³], [l] or [tonnes], energy [MJ] o [kWh] or travelled distance;
- EF (Emission factor) is the quantity of GHG emissions per every unit of activity data;
- OF is Oxidation Factor in the combustion process;
- GWP is Global Warming Potential (IPCC, 4AR): 1 for CO₂; 25 for CH₄ and 298 for N₂O.

Activity data, according to their physical origin, are taken from:

- Fuel gauge meters' records
- Utility bills, e.g. for electric energy consumption
- Direct measurement (for fugitive emissions as LDAR)
- Others methods arranged in some Eni's sites and facilities.

Emission Factors used are consistent with:

- EU-ETS Regulation 601/2012, Table of national standard parameters for year 2018, reviewed and published by Italian Minister for environment sea and land protection, applied to: natural gas, LPG, refinery fuel gas, gas derived from oil, flared gas;
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry 2009 for CO₂, CH₄ e N₂O.

Furthermore, specific emission factors are calculated using fuels' chemical compositions. In detail:

- In Eni's facilities which are within scope of European Trading Scheme, if mandatory and chemical composition of fuel gas or flare gas are known, a source specific emission factor is calculated; otherwise emissions factors from references above is used;
- In Eni's facilities of Upstream BU line, if chemical composition of fuel gas, flare and vented gas are known, a specific emission factor is calculated, otherwise emissions factors from API Compendium are used.

In Eni's sites and facilities where a Leak detection and repair program (LDAR) is in place, fugitive GHG emissions are estimated, reported and monitored through periodic measurement and mostly applying emissions factors from API or EPA standards (e.g. EPA protocol n.453) and expressed as [tCO₂e/year].

Whereas LDAR program is not yet in place, fugitive emissions are estimated through emissions factors, achieved starting from oil and gas production (API Compendium 2009). Currently, all Eni's refineries and petrochemical plants have LDAR programs in place. Furthermore, a massive LDAR program plan is running in Upstream Business line in order to cover all facilities. Finally, in Upstream business line major Eni's facilities, there is a combination of both measurements and calculations to estimate fugitive GHG emissions are in place.

7. Scope 2 Emissions

Stated Scope 2 GHG emission from the generation of electricity, steam, heating and cooling purchased externally and consumed by Eni are included in this category. The general criteria to estimate emissions is the same used for Scope 1 (see eq.1). Emissions are estimated applying a *location-based* approach, considering the average energy-mix in countries where 3rd party purchases occur.

The references for Scope 2 Emissions factors from electricity purchases are: IEA 2017 Energy Outlook, for CO₂ and API Compendium 2009 for CH₄ e N₂O. Emissions factors used to calculate indirect emissions from steam purchases are derived from API Compendium 2009.

The trading of electric energy carried out by Eni and their relevant GHG emissions are accounted for as Scope 3 Category n.3 "Fuel and Energy related activities".

8. Scope 3 Emissions

Stated Scope 3 GHG emissions are those connected with Eni value chain and not accounted for as either Scope 1 or Scope 2 GHG emissions. Scope 3 indirect GHG emissions are classified in the following categories, according with the WBCSD/WRI GHG Protocol Initiative, Corporate Value Chain (Scope 3) accounting and reporting Standard, and the IPIECA standard:

Id.	Category	Description
1	Purchased goods and services	GHG emissions associated with purchased goods and services from tier 1 supply chain and purchases' contracts issued by Eni
2	Capital goods	GHG emissions from purchased capital goods from tier 1 supply chain and purchases' contracts issued by Eni Procurement department. Purchased capital goods are those identified as Capex in Eni 2019 Annual Report
3	Fuel and energy- related activities (not included in scope 1 or scope 2)	GHG emissions from fuel and energy not accounted for either in scope 1 or scope 2, purchased by Eni and sold to end users in 2019.
4	Upstream transportation and distribution	GHG emissions from purchased transportation and distribution services paid by Eni and carried out with vehicles not owned by Eni, including: i) Crude Oil and Petroleum Product maritime transportation; ii) Petroleum Products road transportation; iii) equipment and materials transportation by vessels (Upstream)
5	Waste generated in operations	GHG Emissions from waste management carried out by third parties, that occurs during disposal and treatment of waste generated in Eni's operations. GHG Emissions of wastes sent to landfill include those from both transportation and disposal operations; GHG emissions from waste which undergo incineration, recycling or biological/chemical/physical treatment are limited to their transportation only.
6	Business travels	GHG emissions generated by vehicles not owned by Eni used by Eni's employees for business travels in 2019. GHG emissions of leased vehicles operated by Eni are included in Category n.7.
7	Employee commuting	GHG emissions from commuting travels home-workplace and back, carried out by Eni's employees in 2019. Travels by helicopter or by car from/to Eni's offshore facilities with leased or 3rd party vehicles are included in this category. Commuting travels of Eni Joint Ventures Employees are not included in this category.
8	Upstream leased assets	GHG emissions from assets not owned but leased by Eni. Whenever an asset leased by Eni fall within its organizational boundary, their GHG emissions are accounted for as Scope 1 and those from electric energy consumptions as Scope 2 emissions. GHG emissions in this category has not been estimated in 2019 because relevant activity data is not easily discovered and retrieved, and a hypothesis on it is not simple to make.
9	Downstream transportation and distribution	GHG emissions due to transportation and distribution services of sold products (not paid for by Eni). GHG emissions from transportation and distribution services purchased by Eni are accounted in Category 4, because the transportation occurs before they are sold to final customers. Indeed, most of Eni's products are fuels, so when they are sold to final customers they are not transported or distributed. Moreover, this category is not expected to be material, also according to the recent IPIECA/API overview of methodologies for estimating Scope 3 emissions from O&G Industry.
10	Processing of sold products	GHG emissions from processing carried out by third party of crude oil and natural gas sold by Eni.

Id.	Category	Description
11	Use of sold products	GHG emissions from direct use of the Eni's finished products from equity production of crude oil and natural gas sold in 2019.
12	End-of-life treatment of sold products	GHG emissions associated with end of life treatment of products not burned during their use. Eni's products with relevant end of life treatments are: i) Asphalts and lubricants – Refining; ii) olefins, aromatics, intermediates, styrenics, polyethylene and elastomers – Petrochemical.
13	Downstream leased assets	GHG emissions from assets owned by Eni but leased to third parties. Emissions from this category are not expected to be material and relevant for the Oil&Gas industry. Eni doesn't account Scope 3 emissions related to facilities and buildings not owned and not operated by Eni. The reason is that, besides the data difficult to retrieve, Eni cannot control the emissions and hasn't the opportunity to implement reduction project, so this source should be assumed as not relevant. At this moment, Eni has estimated the GHG emissions from the initiative Enjoy (a car sharing free floating with the objective of developing products and services for sustainable mobility), and they are not material
14	Franchises	GHG emissions from fuel stations in franchising, not included in the Scope 1 and 2 emissions.
15	Investments	GHG emissions from operations of investments (as such classified in the financial report) carried out in the reporting year. Investment emissions are potentially material only for those companies with significant joint ventures that are not captured in their scope 1 and 2 inventory. In the case of Eni, GHG inventory is based on the operational approach and includes also 100% emissions of joint ventures investments in which Eni is the operator. This leads to an already conservative estimation because operated production is far higher than equity production

Indirect Scope 3 GHG emissions from: "Upstream leased assets", "Downstream transportation and distribution", "Downstream leased assets" and "Investments" are out of scope.

For the Oil & Gas Sector, the most relevant category is the Use of sold products (cat.11), for which GHG emissions are estimated as if all oil and natural gas production sold were burned in 2019. In order to set the activity data, the net volume accounting method¹ has been applied, considering only upstream equity hydrocarbons production, which is the greatest hydrocarbon volumes along the O&G value chain. Internal elaborations based on the IEA refining conversion rates from the standard oil barrel have been used in order to calculate final products produced.

9. Lifecycle GHG Emissions Indicators

In addition to the traditional reporting standards, on which current short-term decarbonization targets are set, in order to track the performance in a long-term perspective, Eni in 2020 introduced some new targets based on new metrics that refer to a distinctive accounting method for GHG emissions along the whole value chain of the energy products sold by Eni.

This methodology includes equity GHG Scope 1, 2 and 3 emissions², in absolute and relative terms, linked to the energy products sold, from own operations and third party productions. This approach therefore includes all energy products managed by the various Eni businesses and all the emissions that they generate along the most material segment of the value chain, according to a well-to-wheel approach.

The list of products includes conventional oil products, electricity, but also new bio products originating from new businesses developed with a view to circularity.

Eni's methodology provides as an output three main metrics:

- **Net GHG Lifecycle Emissions:** Absolute net GHG emissions in the life cycle. All Scope 1, 2 and 3 emissions associated with Eni activities and products, along the value chain, net of carbon sinks³, are considered.
- **Net Carbon Footprint⁴:** Overall Scope 1 and 2 GHG emissions, associated with Eni operations, net of carbon sinks

¹ Reference: *Estimating petroleum industry value chain (Scope 3) greenhouse gas emissions. Overview of methodologies*, IPIECA - 2016

² Not directly comparable with Scope 1,2,3 emissions reported according with GRI - GHG Protocol Standard on paragraph 5,6,7

³ For reporting year 2019, there is no contribution due to carbon sink

⁴ Not reported in this Report. It will be included starting from 2020

- **Net Carbon Intensity:** Net Carbon Intensity, expressed as the ratio between absolute net GHG emissions in the life cycle (see Absolute net GHG lifecycle emissions), and the energy content of the products sold.

Additional details on the methodologies adopted are available on Eni's website⁵.

10. GHG Emissions - Results

Scope 1

The Scope 1 GHG emissions from Eni's operations in 2019 are summarised in the table below, disaggregated by business lines and by source type.

Scope 1 GHG Emissions [tCO ₂ eq]	Upstream	Midstream - Gas & Power	Refining & Marketing	Versalis	Other	Eni
Combustion and Process	13,856,954	10,442,817	5,094,546	2,867,109	10,214	32,271,640
Flaring	6,488,913	0	0	0	0	6,488,913
Venting	1,859,799	20,992	0	0	0	1,880,791
Fugitives	548,507	5,468	580	4,710	0	559,266
Overall	22,754,173	10,469,276	5,095,127	2,871,819	10,214	41,200,609

Below are reported Scope 1 GHG emissions splitted by gas and Business Units:

Scope 1 GHG Emissions [t]	Upstream	Midstream - Gas & Power	Refining & Marketing	Versalis	Other	Eni
CO ₂	21,065,737	10,383,622	5,067,835	2,842,130	10,197	39,369,522
CH ₄	63,598	1,250	125	336	0	65,309
N ₂ O	330	183	81	71	0	666
tCO₂eq	22,754,173	10,469,276	5,095,127	2,871,819	10,214	41,200,609

Emissions reported as Upstream include also contributions of some power plants generating electricity not linked with hydrocarbon production. Excluding them, Upstream GHG emissions related to hydrocarbons production in 2019 are equal to 21,811,192 MtCO₂eq. This figure is used to calculate the Upstream GHG intensity Indicator (see following paragraph).

The details of upstream methane emissions, splitted by source is reported in the following table:

⁵ <https://www.eni.com/assets/documents/investor/2020/eng/GHG-Emissions-along-the-value-chain-of-Eni-energy-product.pdf>;
<https://www.eni.com/assets/documents/eng/just-transition/2019/Eni-for-2019-Carbon-neutrality-in-the-long-term.pdf>

Upstream Methane Emissions [t]	2019
Combustion and industrial processes	5,824
Fugitives	21,940
Flaring (incomplete combustion)	20,543
Venting	15,291
Total	63,598

Scope 2

The following table displays Scope 2 indirect Emissions from the use of purchased electricity, steam, heating and cooling disaggregated by business line:

Scope 2 GHG Emissions [t]	Upstream	Midstream - Gas & Power	Refining & Marketing	Versalis	Other	Eni
CO ₂	218,065	18,128	40,980	307,066	76,908	661,148
CH ₄	49	1	3	12	4	68
N ₂ O	34	2	10	39	17	102
tCO₂eq	229,466	18,649	43,910	319,058	82,033	693,116

Scope 2 GHG emissions broken down by type of energy purchased are:

GHG Emissions Sources	[tCO₂eq]
Electric energy purchases	543,236
Heat and steam purchases	149,881
Overall GHG Scope 2	693,116

Scope 3

In the following table are displayed Scope 3 GHG emissions per category:

Id	Emissions sources	[tCO₂eq]
1	Purchased goods and services	1,182,895
2	Capital goods	842,307
3	Fuel and energy- related activities	6,250,772
4	Upstream transportation and distribution	1,624,258
5	Waste generated in operations	62,380

Id	Emissions sources	[tCO₂eq]
6	Business travels	29,543
7	Employee commuting	201,027
8	Upstream leased assets	Out of Scope
9	Downstream transportation and distribution	Out of Scope
10	Processing of sold products	11,825,598
11	Use of sold products	232,589,885
12	End-of-life treatment of sold products	185,662
13	Downstream leased assets	Out of Scope
14	Franchises	223,276
15	Investments	Out of Scope

Lifecycle GHG Emissions Indicators

Metric	Unit	2018	2019
Net GHG Lifecycle Emissions	MtCO ₂ eq	537	533
Net Carbon Intensity	gCO ₂ eq/MJ	72	72

11. GHG Emissions targets

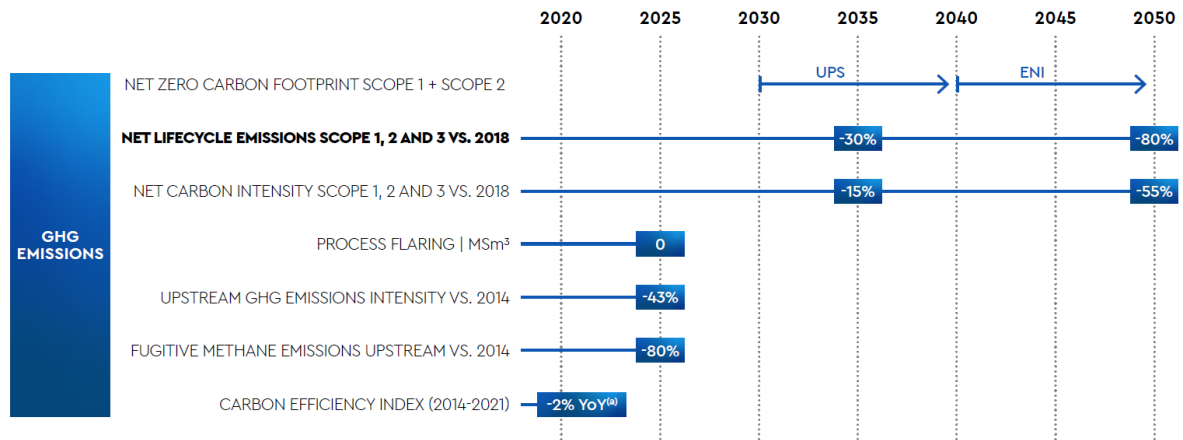
In 2016, among the first in the industry, Eni formulated a series of challenging objectives to improve the performance relating to the operational emissions (Scope 1 + Scope 2) of the assets operated, with specific targets referred to the baseline year 2014:

- Reduction of the Upstream emission intensity index (Scope 1 operated GHG emissions/100% operated hydrocarbon gross production) of 43% by 2025 (- 38% by 2023) vs 2014
- Reduction of upstream fugitive emissions by 80% by 2025 vs. 2014 (target already achieved in 2019)
- Zero gas routine flaring by 2025, 5 years earlier than defined in the context of the Zero Routine Flaring Initiative
- Improvement of the carbon efficiency index (*Operational Efficiency Index*) by an average of 2% per year up to 2021 compared to 2014. This metric includes both Scope 1 and Scope 2 operated emissions

In addition, in 2020, new GHG lifecycle indicators have been developed to set medium and long term targets, referred to the baseline year 2018:

- Net Zero Carbon Footprint (Scope 1 and 2) by 2030 (Upstream) and by 2040 (Overall Eni's operations), extending - in fact - the target of net carbon footprint UPS communicated in 2019
- Reduction of Net GHG Lifecycle Emissions of 80% by 2050 vs 2018 (-30% by 2035)
- 55% reduction in Net Carbon Intensity by 2050 vs 2018 (-15% by 2035)

Targets and commitments



In addition, Eni has developed Scope 1 GHG emissions intensity indicators, specific for Business lines; In the following tables are displayed such GHG emissions intensity indicators, the progress against targets (when applicable) and their rate of change compared to 2019:

Business Unit	Indicator	Unit	Base Year	2017	2018	2019	Var. 2019 vs 2018
Upstream	GHG emissions/100% operated hydrocarbon gross production ⁶	[tonnes CO ₂ eq/kboe]	26.83 (2014)	22.75	21.44	19.58	-8.7%
Upstream	Fugitive Methane Emissions	[MtCO ₂ eq]	2.89 (2014)	0.97	0.97	0.55	-43.5%
Upstream	Process Flaring ⁷	[MtCO ₂ eq]	5.33 (2014)	4.95	4.82	4.61	-4.4%
Eni	Operational efficiency index	[tCO ₂ eq/kboe]	41.27 (2014)	36.01	33.9	31.41	-7.4%
Eni	Net GHG Lifecycle Emissions	[MtCO ₂ eq]	537 (2018)	-	537	533	-0.8%
Eni	Net Carbon Intensity	[gCO ₂ eq/MJ]	72 (2018)	-	72	72	-
Upstream	Methane emissions/marketed gas production 100% operated ⁸	%	N.A.*	0.19	0.16	0.10	-37.5%
Refining & Marketing	GHG emissions/Refinery throughputs (raw and semi-finished materials) ⁹	[tonnes CO ₂ eq/ktonnes]	N.A.*	258.39	252.96	248.36	-1.8%
Enipower	GHG emissions/Equivalent electricity produced	[gCO ₂ eq/kWheq]	N.A.*	395.00	402.42	394.13	-2.1%

* These indicators are not covered by individual company targets, so the base year is not reported. The Upstream Methane Intensity Indicators (methane emissions / marketed gas production 100% operated) contribute to the overall aggregated OGCI reduction target set to reduce methane intensity at 0.25% by 2025 (vs 2017).

With reference to the performance indicators provided in the table:

⁶ Emissions from power plants generating electricity not linked with hydrocarbon production are not included

⁷ Emissions include also the contribution of inert CO₂ content of the flared gas

⁸ The upstream methane intensity indicator refers to the overall methane emissions (converted in Sm³ using a conversion factor of 0.714 kg/Sm³, divided by the operated natural gas production at point of sale (marketed).

⁹ Only refineries are included.

- The upstream GHG intensity index, in 2019 decreased by 9% in 2019 against 2018. The improvement in the index is linked to the increase in production from new low emissions intensity plants (e.g. Zohr in Egypt and OCTP in Ghana), to consolidation of the contribution from reduction of gas process flaring linked to projects launched during 2018, as well as completion of the campaigns to monitor fugitive methane emissions and planned leak maintenance in 2019;
- The upstream methane emissions intensity (0.10% in 2019) decreased by 37% vs. 2018, mainly thanks to monitoring and maintenance campaigns (Leak Detection And Repair - LDAR) conducted at the assets of Zohr (Egypt) and Jangkrik (Indonesia) and improvement of reporting at El Feel and Bouri (Libya).
- The Operational Efficiency Index stood at 31.41 tonnes CO₂eq/kboe, down 7.4% from 2018 (33.90 tonnes CO₂/kboe). This drop is partly due to a reduction in the upstream sector and an improvement of approximately 2% in the EniPower and Refining & Marketing performance indexes.

12. Conclusions

GHG emissions related to 2019 Eni Group's operations, broken down into direct and indirect, are:

GHG Emissions	[tCO₂eq]
Direct Scope 1	41,200,609
Indirect Scope 2	693,116
Indirect Scope 3	
Purchased goods and services	1,182,895
Capital goods	842,307
Fuel and energy- related activities (not included in scope 1 or scope 2)	6,250,772
Upstream transportation and distribution	1,624,258
Waste generated in operations	62,380
Business travels	29,543
Employee commuting	201,027
Processing of sold products	11,825,598
Use of sold products	232,589,885
End-of-life treatment of sold products	185,662
Franchises	223,276

Lifecycle GHG Emissions Indicators	Unit	2019
Net GHG Lifecycle Emissions	MtCO ₂ eq	533
Net Carbon Intensity	gCO ₂ eq/MJ	72

Annex - References

Data and information included are consistent with best practices for inventory development and is derived from guidance provided by:

- Intergovernmental Panel on Climate Change (IPCC), Guidelines for National Greenhouse Gas Inventories, 2006
- American Petroleum Institute (API), Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- WBCSD/WRI GHG Protocol Initiative, A Corporate Accounting and Reporting Standard
- UNI EN ISO 14064-1:2012 Italian adoption of EN ISO standard on Specification with guidance at the Organization level for quantification and reporting of Greenhouse gas emissions and removals;
- IPIECA/API, Estimating petroleum industry value chain (Scope 3) Greenhouse Gas Emissions – Overview of methodologies, 2016.
- WBCSD/WRI GHG Protocol Initiative, Corporate Value Chain (Scope 3) accounting and reporting Standard
- WBCSD/WRI GHG Protocol Initiative, Technical Guidance for calculating Scope 3 emissions (supplement to the Corporate Value Chain (Scope 3) accounting and reporting Standard)
- Intergovernmental Panel on Climate Change (IPCC), 4th IPCC Assessment Report Climate Change, 2007;
- EU ETS Regulation 601/2012, Table of national standard parameters for year 2018 (updated on November 12th, 2018), reviewed and published by Italian Minister for environment sea and land protection.
- UK Government GHG Conversion Factors for Company Reporting, published by the Department for Environment, Food & Rural Affairs (DEFRA) for year 2018.

Furthermore, Eni Group's protocols and procedures on GHG emissions are applied. For the Net GHG Lifecycle emissions and the Net Carbon Intensity indicators, the reference is the "*Methodology for the assessment of GHG emissions along the value chains of Eni products 2020 revision – abstract*".



Eni SpA

**INDEPENDENT AUDITOR'S REPORT ON THE REASONABLE ASSURANCE
ENGAGEMENT OF DIRECT (SCOPE 1) AND INDIRECT (SCOPE 2) GHG
EMISSIONS AND ON THE LIMITED ASSURANCE OF INDIRECT (SCOPE 3)
GHG EMISSIONS AND LIFECYCLE GHG EMISSIONS INDICATORS
DISCLOSED IN THE ENI GHG EMISSIONS STATEMENT - 2019**



Independent auditor's report on the reasonable assurance engagement of direct (Scope 1) and indirect (Scope 2) GHG emissions and on the limited assurance of indirect (Scope 3) GHG emissions and Lifecycle GHG Emissions Indicators disclosed in the Eni GHG Emissions Statement - 2019.

To the board of directors of Eni SpA

We have been engaged to perform a reasonable assurance engagement on Eni Group's direct (Scope 1) and indirect (Scope 2) Greenhouse Gases (hereinafter "GHG") emissions and a limited assurance engagement on Eni Group's indirect (Scope 3) GHG emissions and on the Group's Lifecycle GHG Emissions Indicators, disclosed in the "Eni GHG Emissions Statement – 2019", of Eni Group (hereinafter the "Group") for the year ended 31 December 2019 (hereinafter the "GHG Statement").

Responsibility of the directors for the GHG Statement

The directors of Eni SpA are responsible for preparing the GHG Statement in accordance with the applicable criteria, as indicated in the Annex "References" of the GHG Statement.

The directors are responsible for that part of internal control that they consider necessary to prepare a GHG Statement that is free from material misstatements due to fraud or unintentional behaviors or events.

Moreover, the directors are also responsible for defining the GHG performance targets of Eni Group, as well as for identifying the stakeholders and the significant aspects to be reported.

Auditor's Independence and Quality Control

We are independent in accordance with the principles of ethics and independence set out in the *Code of Ethics for Professional Accountants* published by the *International Ethics Standards Board for Accountants*, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour.

Our audit firm adopts *International Standard on Quality Control 1 (ISQC Italy 1)* and, accordingly, maintains an overall quality control system which includes processes and procedures for compliance with ethical and professional principles and with applicable laws and regulations.

PricewaterhouseCoopers Advisory SpA

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Auditor's responsibility

We are responsible for expressing a conclusion, on the basis of the work performed, regarding the compliance of the GHG Statement with the applicable criteria applied as indicated in the Annex "References" of the GHG Statement. We conducted our engagement in accordance with the with "International Standard on Assurance Engagements ISAE 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereafter "ISAE 3000 Revised") and "International Standard on Assurance Engagements 3410 – Assurance Engagements on Greenhouse Gas Statement" (hereafter also "ISAE 3410"), issued by the International Auditing and Assurance Standards Board (IAASB) for reasonable assurance (Scope 1 and Scope 2 GHG Emissions) or limited assurance (Scope 3 GHG emissions and Lifecycle GHG Emissions Indicators) engagements. The standard requires that we plan and perform procedures to obtain reasonable or limited assurance about whether the GHG Statement is free from material misstatement; it also indicates that a "GHG quantification is subject to inherent uncertainty" because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

A reasonable engagement in accordance with ISAE 3410 (carried out with regard to Scope 1 and Scope 2 GHG emissions) involves performing procedures to obtain evidence about the quantification of emissions and related information in the GHG Statement. The nature, timing and extent of procedures selected depend on the practitioner's judgment, including the assessment of the risks of material misstatement, whether due to fraud or error, in the GHG Statement. In making those risk assessments, we considered internal control relevant to Eni Group's preparation of the GHG Statement. A reasonable assurance engagement also includes interviews, primarily with company personnel responsible for the preparation of the information presented in the GHG Statement, analysis of documents, recalculations and the following activities aimed at:

- 1) Understanding of processes and risks underlying the generation, detection and management of the Scope 1 and Scope 2 GHG emissions data and information reported in the GHG Statement. In order to assess the above-mentioned risks of the subject matter information we have conducted interviews and discussions with the management of Eni Group.
- 2) Performing analytical procedures to respond to a set of identified risks; in particular, we have conducted interviews and discussions with the management of Eni Group in order to:
 - define expectations based on the understanding of the processes underlying relevant data;
 - determine suitability, assess reliability of underlying data and develop an independent expectation;
 - define a significant difference or threshold, compute differences, investigate differences and corroborate with evidence, if any.
- 3) Performing control testing activities to respond to a set of identified risks; in particular, we have conducted interviews and discussions with the management of Eni Group in order to:
 - select controls to test focusing on those controls deemed relevant for the scope of the assurance activity;



- assess and consider the risk associated with each control selected for testing, in order to determine the nature, timing, and extent of evidence to be obtained about the control's operating effectiveness;
 - based on the above, evaluate and obtain evidence whether the controls selected for testing have operated effectively;
 - comment and discuss any deviation and understand its materiality.
- 4) Performing substantive testing activities to respond to a set of identified risks; in particular, we have conducted interviews and discussions with the management of Eni Group in order to:
- understand the processes underlying the preparation, collection and management of the significant qualitative and quantitative information included in the GHG Statement;
 - test the subject matter information for mathematical accuracy, consistency and cross-referencing with relevant documentation acquired;
 - comment and discuss any deviation and understand its materiality.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

A limited assurance engagement (carried out with regard to Scope 3 GHG emissions and Lifecycle GHG Emissions Indicators) undertaken in accordance with ISAE 3000 Revised and ISAE 3410 involves assessing the suitability in the circumstances of Eni Group's use of applicable criteria applied as indicated in the Annex "References" of the GHG Statement as the basis for the preparation of the GHG statement, assessing the risks of material misstatement of the GHG statement whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG statement. A limited assurance is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we have performed the following activities:

- 1) Understanding of the processes that lead to the generation, detection and management of the Scope 3 GHG emissions and Group's Lifecycle GHG Emissions Indicators data and information reported in the GHG Statement.
- 2) Performing of limited verification procedures to ascertain the correct calculation and aggregation of data, by means of interviews and discussions with the management of Eni Group and of limited documentary evidence procedures.

The procedure performed in a limited assurance engagement vary in nature and timing form, and are less in extent than for a reasonable assurance engagement. Consequently, the level of



assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether Eni Group's GHG Scope 3 GHG emissions and Lifecycle GHG Emissions Indicators have been prepared, in all material respects, in accordance with the criteria applied as indicated in the Annex "References" of the GHG Statement as the basis for the preparation of the GHG statement.

Conclusion

In our opinion, Eni Group's direct (Scope 1) and indirect (Scope 2) GHG emissions for the year ended 31 December 2019 disclosed in the GHG Statement are prepared, in all material respects, in accordance with the applicable criteria, as indicated in the Annex "References" of the GHG Statement.

Based on the limited assurance procedure we have performed, nothing has come to our attention that causes us to believe that Eni Group's:

- indirect (Scope 3) GHG emissions for the year ended 31 December 2019,
- Lifecycle GHG Emissions Indicators for the year ended 31 December 2018 and 31 December 2019,

disclosed in the GHG Statement are not prepared, in all material respects, in accordance with the applicable criteria, as indicated in the Annex "References" of the GHG Statement.

Other aspects

We have verified that Eni Group owns plants subject to the *European Union Emissions Trading Scheme* - EU ETS, which are ISO 14064 certified by a third-party certification body. We have carefully analysed the activities performed by the third-party certification body and we have evaluated the sufficiency and appropriateness of the evidence obtained. Therefore, we have deemed it not necessary to perform additional assurance activities on the certified GHG emission subject to the EU ETS scheme.

The GHG Statement for the year ended 31 December 2018, whose data are presented for comparative purposes, have only been subject to limited assurance procedures by another auditor who, on 7 May 2019, expressed a conclusion without remarks on that statement.

Milano, 24 August 2020

PricewaterhouseCoopers Advisory SpA

A handwritten signature in black ink, appearing to read 'Paolo Bersani', written in a cursive style.

Paolo Bersani
(Partner)