

FOR

CARBON NEUTRALITY IN THE LONG TERM

ENI FOR 2019



MISSION



We are an energy company.

We concretely support a just energy transition,

with the objective of preserving our planet

and promoting an efficient and sustainable access to energy for all.

Our work is based on passion and innovation,

on our unique strengths and skills,
on the equal dignity of each person,
recognizing diversity as a key value for human development,

on the responsibility, integrity and transparency of our actions.

We believe in the value of long-term partnerships
with the Countries and communities where we operate,
bringing long-lasting prosperity for all.



The new mission represents more explicitly the Eni's path to face the global challenges, contributing to achieve the SDGs determined by the UN in order to clearly address the actions to be implemented by all the involved players.

THE SUSTAINABLE DEVELOPMENT GOALS

Global goals for a sustainable development

The 2030 Agenda for Sustainable Development, presented in September 2015, identifies the 17 Sustainable Development Goals (SDGs) which represent the common targets of sustainable development on the current complex social problems. These goals are an important reference for the international community and Eni in managing activities in those Countries in which it operates.



Contents

WHY READ ENI FOR 2019 CARBON NEUTRALITY IN THE LONG TERM?

In the report Eni for 2019, Eni wants to describe its contribution to a **just transition**, an energy transition that allows to protect the environment and give access to energy for all, but at the same time is socially fair. Aware of the scientific evidences of climate change reported by the Intergovernmental Panel on Climate Change (IPCC), Eni intends to play a leadership role in this transition, supporting the objectives of the Paris Agreement. Eni's commitments in this direction are described in this appendix of the sustainability report **Eni for - Carbon neutrality in the Long Term**, that confirms the willingness of the company to promoting a comprehensive and effective climate change disclosure. This report implements the recommendations of the Task Force on Climate Related Financial Disclosure (TCFD) of the Financial Stability Board; Eni is the only O&G company involved in the TCFD activities since the beginning.

In the **Consolidated Disclosure of Non-Financial Information (NFI)**, drafted in accordance with the Italian Legislative Decree 254/2016, integrated in the Annual report, these topics are reported in a concise way, always following the TCFD recommendations.

Message to our stakeholders	2
Main results	3

REFERENCE SCENARIO 4

GOVERNANCE 6

Role of the board	6
Role of management	7

RISK MANAGEMENT 10

Integrated climate risk management model	10
Risks and opportunities related to climate change	11

STRATEGY 14

Eni Strategy	14
The new value chain approach	18
Resilient and flexible oil & gas portfolio	21
Industrial scale renewable energy projects	23
Circular economy	25
Sustainable mobility	30
Retail business development	33
Carbon capture and storage	34
Forestry	34
Research and development in the energy transition	36
Partnerships for carbon neutrality in the long term	38
Climate disclosure and positioning	39

METRICS & TARGETS 44

Targets and Commitments	44
Metrics	50

CORRESPONDANCE TABLE: TCFD RECOMMENDATIONS – ENI REPORTING 51

RELATED DOCUMENTS

- [Eni for 2019 - A just transition](#)
- [Eni for 2019 - Sustainability Performance](#) (available only on eni.com)



INTERVIEWS

CASE STUDIES

LINKS AND FURTHER INFORMATION

Message to our stakeholders

The fight against climate change and commitment to sustainable development, being for long time the focus of international concern, have now become as the clear guidelines for developing the global agenda and absolute priorities for governments, civil society, investors and companies. Strengthening of Countries' commitments and a catalyst for global action must be concrete outcomes of the next COP26. Eni will be an active part of this process, conscious as only those who are able to seize these opportunities, in particular in the energy sector, will be winners, guaranteeing long-term value creation.

This is why we at Eni have launched a new phase in the development of our business model, able to combine economic-financial and environmental sustainability, to supply energy and create value while at the same time achieving a reduction in our carbon footprint in line with the Paris Agreement.

The strategy that we announced in February this year constitutes our turning point. We have extended our plan looking towards the next 30 years, with the goal of actively contributing to the energy transition and becoming a leading company for supplying decarbonised energy products.

Yet this has been possible only thanks to the progress that we have achieved over the past few years, in which the transformation process undertaken has allowed us to integrate the principles of sustainability into each of our businesses, inspired by the United Nations' Sustainable Development Goals to which our very mission refers.

Relying on a strong technological lever, we have increased the efficiency of our core business, reducing our emissions intensity in the upstream sector by 27% over the past 6 years. We have introduced circular economy initiatives in the downstream sector where, as the first company in the world to have converted a traditional refinery into a biorefinery in Venice, we have attained a biorefining capacity of 0.66 Mtonnes/year in 2019, aiming to reach around 1 Mtonnes/year from 2021, thanks to the conversion of the refinery in Gela. We are increasing our production of electricity from renewable sources, developing numerous projects in Italy and abroad.

Today, therefore, our company is placed in the best position to maximise business opportunities deriving from an energy market in rapid transformation. Once again thanks to the know-how of our people, to proprietary technologies, innovation, flexibility and resilience of our assets, we are deploying an industrial strategy in which our businesses will be increasingly more integrated, just as the focus on renewable sources, bioproducts, exploitation and recovery of organic and inorganic waste materials and on the concomitant development of retail businesses will also increase.

This will allow us, by adopting a strict and distinctive approach which considers all GHG emissions associated to the life cycle of all the energy products sold in our portfolio, to reduce our net lifecycle emissions in relative value by 55% and in absolute value by 80% in 2050 compared to 2018. Eni's target is aligned and well above the 70%, benchmark indicated by IEA in the SDS scenario, which is considered to be the reference for the containment of global warming set by the Paris Agreement. A reduction, the one to which Eni aims, which is therefore in line with the necessary tightening of commitments.

The support of sound Governance, as ours is, is crucial to this process. The Board of Directors plays a central role in managing the main themes linked to climate change and sustainability, and the debate within the company on strategic issues is supported by specific Committees and by the Advisory Board, in which some of the foremost international experts in the energy sector serve. This makes Eni's "Climate Governance" one of the most advanced in the international scenario.

For some time we have been committed to promoting a constant, open and transparent dialogue on climate change issues. This commitment is part of a wider relationship of transparency that we have begun with our stakeholders on important sustainability themes in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board, in which Eni has been involved since its inception.

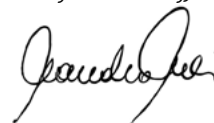
Lastly, for Eni, support of international initiatives and partnerships is an opportunity to make good use of synergies and pursue collective actions in response to climate challenges, to explore new businesses and new breakthrough technologies in particular in the field of research, where we can count on a strong network of cooperation all over Italy and internationally, to intensify the work at our 7 research centres.

An important example is cooperation with the foremost Italian technical-scientific bodies (ENEA, CNR) and international agencies (MIT) to boost industrial development of technology for production of energy by magnetic fusion.

The energy transition, in its global and collective aspects, demands a common response and a long-term vision able to grasp emerging business opportunities. Only by embracing the values of sustainability can we reshape the present to obtain success in the future and we at Eni want to play a decisive role in this process, along a route that, in the long term, will lead us to be a carbon-neutral company. Today more than ever, despite the important new challenges that the Covid-19 pandemic and its profound impacts on the markets have for us, we want to confirm our commitment in this direction.

This report, which we are publishing for the third year in a row in line with the recommendations of TCFD and which recounts the stages in our progress towards carbon neutrality, year after year makes the substance of our commitment and our actions clear, in line with the wishes of our stakeholders to which it is addressed.

Claudio Descalzi
Chief Executive Officer



Main results

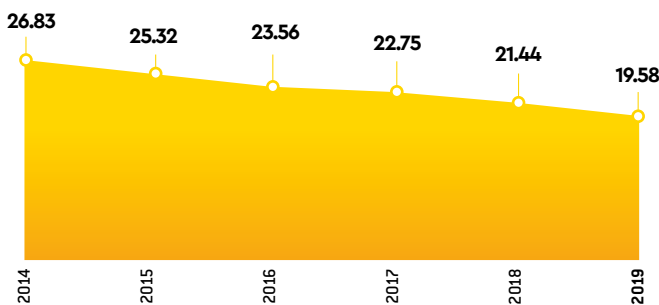
		2017	2018	2019
INDICATOR				
GHG emissions/100% operated hydrocarbon gross production (upstream)	tonnes CO ₂ eq/kboe	22.75	21.44	19.58
Methane fugitive emissions (upstream)	ktonnesCH ₄	38.8	38.8	21.9
Volumes of hydrocarbon sent to process flaring	billion Sm ³	1.6	1.4	1.2
Carbon efficiency index ^(a)	tonnes CO ₂ eq/ kboe	36.01	33.90	31.41
Equity hydrocarbon production	kboe/d	1,816	1,851	1,871
Incidence of natural gas on total equity hydrocarbon production	%	53	52	52
Capacity of biorefineries	ktonnes/year	360	360	660 ^(b)
R&D expenditures	€ million	185	197.2	194
of which: related to decarbonization	€ million	72	74	102

(a) It expresses the GHG emissions intensity (Scope 1 and Scope 2 calculated on an operated basis expressed in tonnesCO₂eq) of Eni's main industrial productions compared to operated production (converted by homogeneity into barrels of oil equivalent using the Eni average conversion factors) in the individual businesses of reference, thus measuring their degree of operating efficiency in a decarbonization scenario.

(b) Includes the pro-rata of installed capacity of Gela's biorefinery (720,000 tonnes/y) started in August 2019.

INDICATORS CALCULATED ON 100% OF DATA FOR OPERATED ASSETS

UPSTREAM GHG EMISSION INTENSITY INDEX (tonnesCO₂eq/kboe)



-81% TARGET REACHED
Upstream fugitive methane emissions vs. 2014

1.87 MLN BOE/D
New record in hydrocarbon production

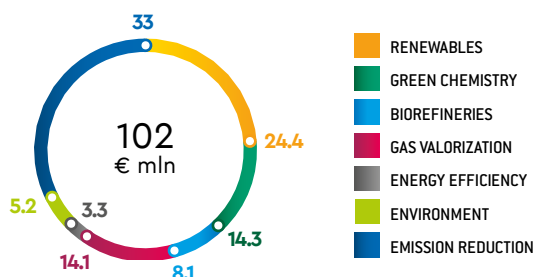
-9%
vs. 2018 Upstream GHG emission intensity

-27%
vs. 2014 Upstream GHG emission intensity

-7.4%
vs. 2018 Carbon efficiency index

-15%
vs. 2018 volumes of hydrocarbon sent to process flaring

R&D SPENDING IN DECARBONIZATION - 2019



-5%
vs. 2018 direct GHG emissions (Scope 1)

Start up of the biorefinery in Gela in August 2019

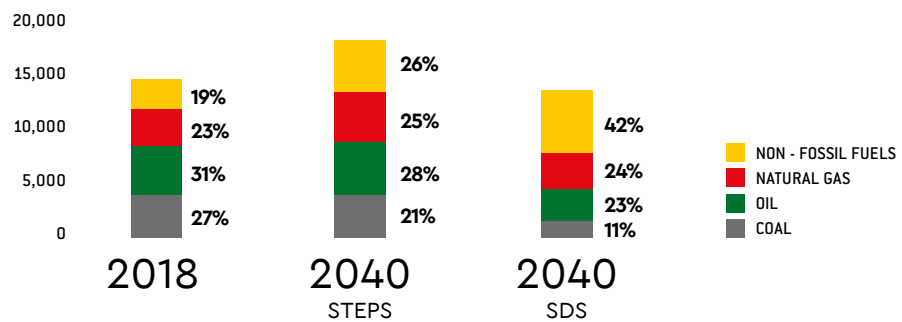
Reference scenario

The energy sector is required to respond to a dual challenge: satisfying the growing energy needs of an ever more numerous population, guaranteeing sufficient access to energy, and limiting greenhouse gas emissions into the atmosphere, in order to contribute to the decarbonisation process.

The International Energy Agency (IEA) identifies two main options for possible evolution of the energy system: one scenario (STEPS, Stated Policies Scenario) that considers the policies already put in place and planned by Governments, with a global energy demand that increases by 1% per year and a decarbonised scenario (SDS, Sustainable Development Scenario) that pursues the main energy goals for sustainable development, including full access to energy, reduction of local pollution and limitation of the temperature increase to well below 2 °C and which leads to a global energy demand in 2040 lower than the current level.

ENERGY DEMAND BY SOURCE

(Mtoe, %)



STEPS: Stated Policies Scenario, World Energy Outlook 2019, International Energy Agency (IEA).

SDS: Sustainable Development Scenario (SDS), World Energy Outlook 2019, International Energy Agency (IEA).

Source: IEA (2019) World Energy Outlook. All rights reserved.

In both of these scenarios, oil and gas continues to maintain a central role up to 2040 covering around 50% of energy needs. In the STEPS scenario, the global demand for oil continues to grow in the medium term, up to 2025, at around one million barrels per day per year, while it drops significantly in the long term due to the decrease expected in consumption by cars. Underpinning



The energy sector must guarantee the continuity of a highly strategic business, while still maintaining the highest standards of safety and continuing to ensure it meets commitments made to target the decarbonisation process, seizing the opportunities that arise from the energy transition

HEALTH EMERGENCY RELATED TO COVID-19

The beginning of 2020 was marked by the spread on global scale of the health crisis linked to COVID-19, which has triggered a series of containment measures, such as the shutdown of production activities and social distancing, with enormous negative effects on the economic context and as a consequence on energy demands. The extent of the effects will depend strictly on the duration of the lockdown and on the impact of the unprecedented economic measures decided by the Governments all over the world. The energy sector, as well as having to cope with challenges connected with the shrinkage of consumption, weakening of prices of commodities and in general of the context in which it operates, must guarantee the continuity of a highly strategic business, while still maintaining the highest standards of safety and continuing to ensure it meets commitments made to target the decarbonisation process, seizing the opportunities that arise from the energy transition.



FOR FURTHER INFORMATION: For all the initiatives launched by Eni for the health emergency, see eni.com

this trend are the increasingly more challenging goals for improved efficiency of the new vehicles, greater electrification and growing use of shared transport modes. In the transport sector consumptions of petroleum are concentrated in uses where replacement of traditional fuels is more difficult. However, for heavy transport there is room, in the longer term, for a considerable improvement in efficiency and penetration of new alternative fuels such as biofuels, natural gas and hydrogen. In the SDS scenario, with regard to the demand for oil, the only sector that continues to grow in the long term is petrochemicals, in particular production of plastic and asphalt. In this context, both in the medium and in the long term, new discoveries and new upstream developments will be needed to satisfy petroleum needs and combat the decline in existing production. Gas, favoured by the high efficiency of the plants and by low emissions coefficients, is the only fossil fuel that is increasing its share of the mix in all the scenarios expected by IEA, and continues to account for around a 1/4 of energy needs. Growth in gas consumption will be driven by industry and power, where gas replaces fuels with higher environmental impact, and by non OECD Countries, for many of which, gas represents an immediate response to increasing energy needs.

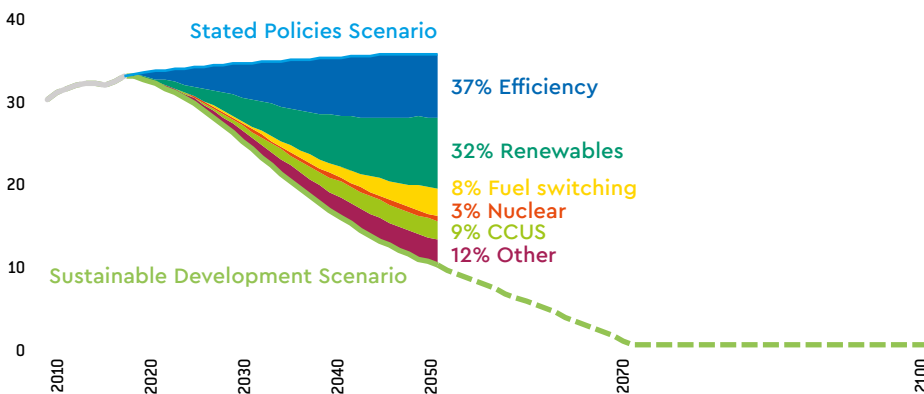
In the IEA scenarios, low-carbon gases (in particular biomethane) play an important role in decarbonising the gas supply chain above all in the SDS scenario, while also guaranteeing the use of existing gas infrastructures. The main challenge to be met for market development will be containment of production costs in order to ensure widespread use.

The progresses achieved in digital technologies and reduction in costs are opening up enormous opportunities for development of renewable sources. The latter will become increasingly important, managing to satisfy 20% of primary consumption in the STEPS scenario and as much as 34% in the SDS (vs. 14% in 2018). In particular, solar and wind power, favoured by a progressive reduction of costs, by 2040 will account for 7% in the STEPS scenario and 17% in the SDS (vs. 2% in 2018).

Today, around 2/3 of global greenhouse gas emissions originate in the energy sector; of these, about 55% is related to combustion of oil and gas, with coal covering the remaining part. According to IEA, in order to contain global warming well below 2 °C, as foreseen by the Paris Agreement, emissions in the energy sector need to be halved by 2040, reaching a level of about 1/3 of the current emissions by 2050, and targeting net zero emissions in 2070. This trend requires an immediate change in the energy mix and challenging efficiency measures represented in the SDS scenario.

Natural gas is the only fossil fuel that is increasing its share of the mix in all the scenarios expected by IEA

ENERGY-RELATED CO₂ EMISSIONS AND REDUCTIONS BY SOURCE IN THE SUSTAINABLE DEVELOPMENT SCENARIO
 [Gtonnes CO₂]



In order to realize the SDS scenario, radical changes are needed in the ways in which energy is produced and consumed, through the use of energy efficiency and low-carbon technologies, such as renewables, nuclear power and CCUS (carbon capture, utilization and storage).

Source: IEA (2019) World Energy Outlook. All rights reserved.

Governance

On the subject of climate change, the Board of Directors is supported mainly by three committees of directors: Sustainability and Scenarios Committee, Control and Risk Committee and Remuneration Committee

Role of the board

The Board of Directors¹ (BoD) plays a central role in managing the main aspects linked to climate change.

In particular, based on a proposal by the **Chief Executive Officer** or by the competent bodies, the Board of Directors examines and/or approves:

- goals related to climate change and energy transition, as an integral part of business strategies;
- the portfolio of **Eni's top risks**, including climate change;
- Eni's medium-long term plan, aiming to guarantee the sustainability of the business portfolio over a thirty-year period, in line with what is provided for in the Four-Year Strategic Plan;
- The **Short-Term Incentive Plan** and the proposal for the **Long-Term Equity Incentive Plan** with targets linked to reduction of GHG emissions and to energy transition for the CEO and managers with strategic responsibilities²;
- **Annual sustainability** results, including the sustainability report (**Eni for**) and the **HSE review**, including climate change mitigation contribution performances;
- **institutional reporting**, which includes the Interim Consolidated Report and the Annual Financial Report (including the Consolidated Disclosure of Non-Financial information);
- the relevant projects and their progress, on a half-year basis, with sensitivity to Eni and IEA SDS carbon pricing³;
- resilience tests on all upstream cash generating units (CGUs) applying the IEA SDS scenario;
- **strategic agreements**, including climate change-related initiatives.

SUSTAINABILITY AND SCENARIOS COMMITTEE (SSC - set up in 2014)

It addresses integration issues among strategy, evolution scenarios and business sustainability over the medium to long term and examines the scenario to prepare the Strategic Plan. During 2019, the SSC discussed climate change issues at all meetings, including carbon neutrality strategy, energy scenarios, renewable energies, research and development to support energy transition, climate partnerships and water resources and biodiversity issues⁴.

CONTROL AND RISK COMMITTEE (CRC)

It supports the BoD in the quarterly review of the main risks, including climate change.

REMUNERATION COMMITTEE

It proposes the general criteria for the annual incentives for the CEO and managers with strategic responsibilities to the BoD; criteria which include specific targets associated with reduction of GHG emissions.

Since the second half of 2017, for an even broader view of the factors affecting long-term value creation, the Board has set up an **Advisory Board** to support Eni's BoD and CEO. The Advisory Board, composed of prominent international experts, further strengthens the monitoring of long-term global trends linked to energy markets, geopolitical aspects, technological innovation and the progress towards energy transition.

The Board has assigned a central role in the internal control system to the **Chairman**, in particular with regards to oversee the Internal Audit function. The chosen model establishes a clear separation between the functions of Chairman and Chief Executive Officer. As from 2018, Eni has also ensured its contribution to the "Climate Governance" initiative of the **World Economic Forum** (WEF), with the involvement of the Eni BoD thanks to the role played by its Chairman. During 2019, Eni has taken part in other initiatives launched within the WEF, in particular to define an assessment model for governance processes adopted by companies to manage risks and opportunities related to climate change. With reference to training activities for directors on climate change, as part of the meetings of the Sustainability and Scenarios Committee and the Advisory Board, periodical in-depth training sessions by external experts are held.

1) [Board of Directors](#). To learn more about Eni's organisational structure, please refer to the section "Company" of the corporate website (www.eni.com) and to the [2019 Corporate Governance and Shareholding Structure Report](#).

2) Managers with strategic responsibilities: Managers reporting directly to Eni's Chief Executive Officer and Chairman and members of the Board.

3) Sustainable Development Scenario (SDS) from the World Energy Outlook 2019 of the International Energy Agency (IEA).

4) For more information, please refer to the section "Sustainability and Scenarios Committee" in the [2019 Corporate Governance and Shareholding Structure Report](#).

Role of management

The issues connected with management of risks and opportunities related to climate change are considered and integrated in all the stages of the business cycle, starting from negotiations for acquisition of mining rights up to decommissioning. All the company functions, according to their areas of responsibility, contribute to achieving the long-term progress towards carbon neutrality started by Eni. The CEO is responsible for identifying the main corporate risks, including the risks connected with climate change, guides the strategies and monitors progress. Each year the CEO assigns the guidelines⁵ for defining the strategic plan related to the progress towards carbon neutrality for each business line and for the support functions. In 2019, the Evaluation for Medium and Long Term Plans Committee, chaired by the CEO was set up with the aim of supporting the organic and sustainable development of Eni’s business, identifying strategic and operative guidelines and guiding the actions to ensure that the targets related to decarbonisation are met.

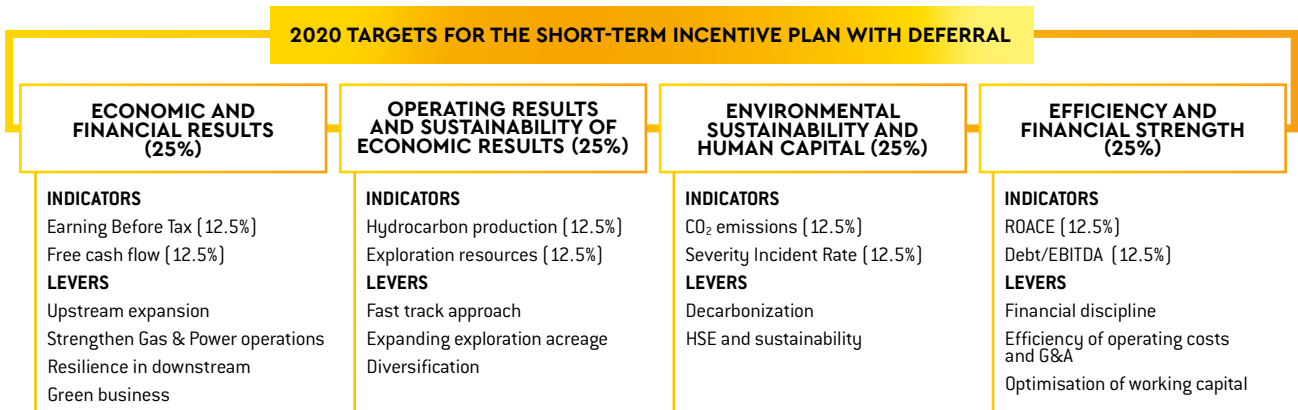
The strategic commitment to reducing Eni’s carbon footprint is a fundamental target for the company and is also included in the Variable Incentive Plans for the CEO and company management⁶. In particular:

- the new 2020-2022 **Long-Term Equity-based Incentive Plan** supports the implementation of the Strategic Plan by introducing new parameters related to the decarbonisation, energy transition and circular economy targets, in line with the goals communicated to the market and with a view to alignment with the interests of all the stakeholders. The total weight of these targets is equivalent to 35% both for the CEO and for all the Eni management involved in the Plan;

The 2020-2023 Long Term Equity based Incentive Plan foresees a specific goal on decarbonisation, energy transition and circular economy with an overall weight of 35%



- the **Short-Term Incentive Plan** with deferral, in continuation with the last few years, includes the target of reducing the operated upstream GHG emissions intensity in line with the target defined for 2025. This target is assigned to the CEO with a weight of 12.5% and to all of the Eni management population with responsibilities related to meeting the carbon neutrality strategy targets.



[a] Severity Incident rate: Eni internal index to calculate total recordable injuries with respect to the number of worked hours, taking into account the severity level of the accident based on the days of absence from work.

5) See [Eni for 2019 - A just transition](#) p. 14 for an in-depth analysis of the planning process.
 6) For further details see the [2020 Report on remuneration policy and remuneration paid](#).

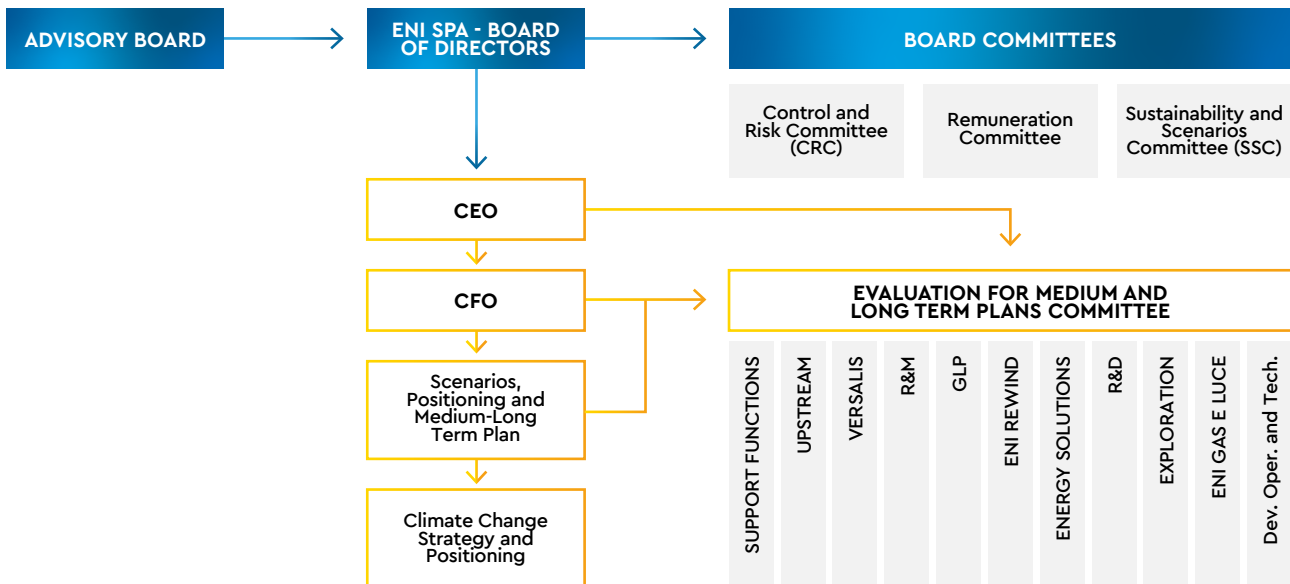
All Eni structures are involved in definition and implementation of the carbon neutrality strategy

All Eni structures are involved in definition and implementation of the carbon neutrality strategy. Moreover, Eni has created specific structures and protections aiming to favour the progress towards energy transition:

- the **Scenarios, Positioning and Medium to Long-term Plan** central organisational function that superintends the processing and consolidation of the medium to long-term plan and guarantees the processing of the hypotheses for configuration of the energy sources portfolio for achieving the goals stated in the plan, including those related to ESG. Within this function, the **Climate Change Strategy and Positioning** unit coordinates the process for defining Eni's climate strategy, development and monitoring of the portfolio of initiatives in line with the international agreements on climate;
- the **Energy Solutions business division** (from 2015), for the development of renewable energies with medium-large scale projects);
- the central **REDD+ and Africa program initiatives** function, which is responsible for processing and proposing, in line with the decarbonisation strategy and with the support of the other Eni functions concerned, the trends and action plans for REDD+ and other Forestry initiatives;
- the central **Research and Development function**, through the Technologies for Energy Transition and Biomasses programme to identify technologies to support the energy transition.

Furthermore, within the Business Lines there are specific functions and units responsible for achieving what is stated in the strategy. For example, in the R&M Business, there is the Bio development, Sustainable mobility & Circular Economy (BSCE) unit, in the Chemicals business (Versalis) there is the Circular Economy, Sustainability & Product Stewardship unit which guarantees the processing of the Versalis positioning on circular economy ensuring the monitoring of the initiatives, while in Eni-Rewind there is the Circular economy & business services unit.

CLIMATE CHANGE MANAGEMENT ORGANIZATION CHART



The management is constantly informed on the progress of the carbon neutrality strategy through various opportunities for sharing, for example:

- **Leadership meeting** at which the CEO illustrates the strategies and objectives of the Strategic Plan;
- **Business review**: a quarterly meeting between the Chairman, the CEO and the managers reporting directly to the latter to monitor progress on the objectives and implementation of strategic lines;
- **HSE review**;
- **Annual and interim results**;
- **Quarterly report on top risks**;
- **CEO blog** in which the CEO comments on the main events on the Corporate Intranet.



Award ceremony during the Eni Environment Award 2019 event

ENI EMPLOYEE ENGAGEMENT

In 2019, engagement and training activities continued for Eni employees on issues related to climate change and the environment in order to increase internal awareness of the importance of these issues. In addition to the technical training courses for the functions directly involved, online training courses on climate change and energy transition have been created and are available to all employees. Moreover, specific modules dedicated to these issues have also been included in training initiatives for young graduates (Eni Academy) and for those responsible for support functions “Eni si racconta” (Eni Tells Its Own Story) in which colleagues describe their activities and processes to other colleagues. Additionally, the CEO constantly brings the Company's results in terms of reducing the carbon footprint of its activities and the actions needed to implement its carbon neutrality strategy to the attention of the employees.

To encourage the sharing of best practices, each year the industrial companies that have distinguished themselves as best performers on environmental and climate issues are presented with the Eni Environment Award: accolades assigned to ideas, initiatives and special and innovative projects that have made it possible to combine the operational efficiency of industrial processes with environmental protection and emissions reduction.

Also in 2019, the commitment of Eni people to the circular economy continued. As part of the “WasteReloaded” campaign, the “RiVending” project was launched (see Versalis Revive® on p. 26) to recycle the cups and stirrers used in beverage machines in the head offices in San Donato Milanese, to produce a secondary selected polystyrene raw material that helps to supply the Versalis plant in Mantua. During 2019, Oilà, a project to recover used cooking oils produced by Eni's people and their families, continued thus transforming waste that is potentially harmful to the environment, such as waste oil, into a new energy resource.

The involvement and training of Eni employees on issues related to climate change and the environment continued in 2019 in order to increase internal awareness of the relevance of these issues

Risk management

The Integrated Risk Management Model has the aim of supporting the management in the decision process by strengthening awareness of the risk profile and related mitigations

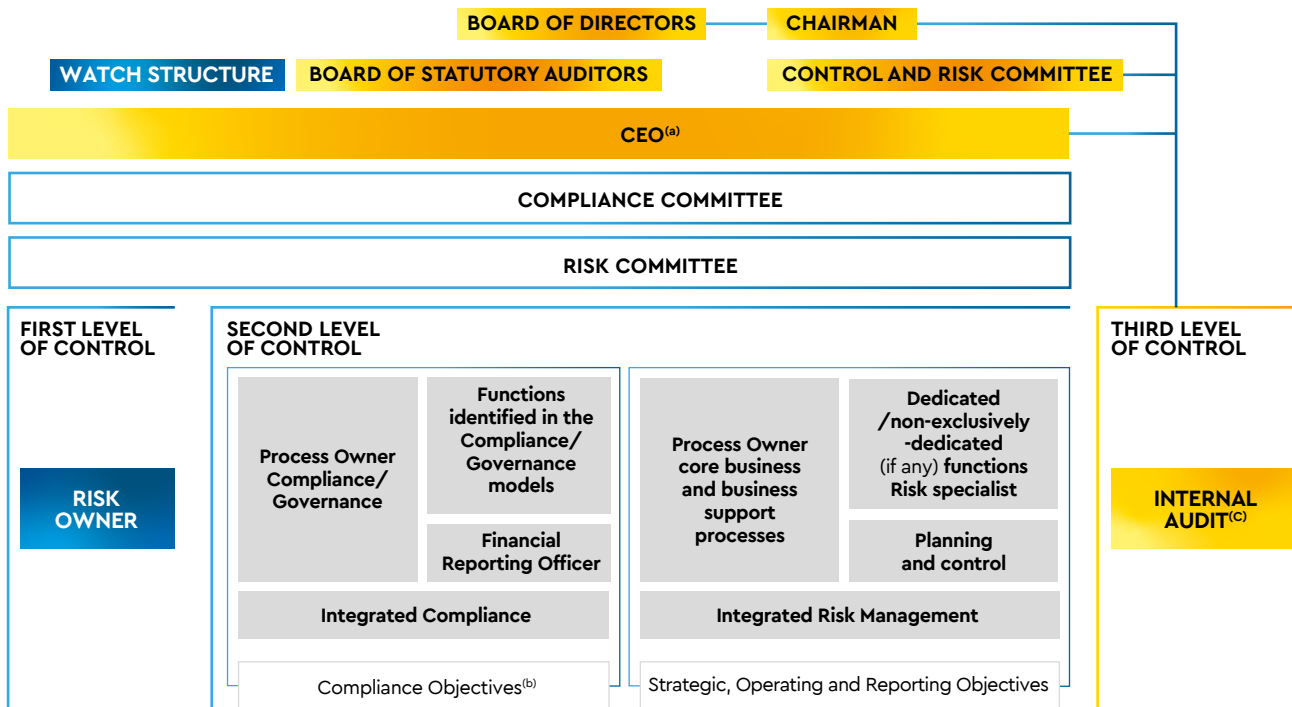
Integrated climate risk management model

The risk and opportunity management process connected with climate change is part of the Integrated Risk Management (IRM) Model, developed by Eni with the aim of supporting the management in the decision process by strengthening awareness of the risk profile and related mitigations.

Important roles and responsibilities in the IRM process are:

- the **BoD** defines the nature and the level of risk compatible with the strategic objectives also with a view to business sustainability in the medium to long term, and it outlines the guidelines for identifying, assessing, managing and monitoring risks;
- the **Control and Risk Committee** supports the BoD in defining the guidelines for risk management. The Board of Statutory Auditors monitors the effectiveness of the IRM process;
- the **Chief Executive Officer** puts the BoD's guidelines into practice, using the IRM process to identify, assess, manage and monitor the main risks;
- the **Risk Committee**, composed of Eni top management, supports the CEO in identifying, assessing, managing and monitoring risks.

The IRM model ensures detection, consolidation and analysis of all of Eni's risks and aids the BoD in checking the compatibility of the risk profile with the strategic objectives, even in the medium-long term. The process is continuous and dynamic and provides for the following sub-processes: (i) risk governance, methods and tools, (ii) risk strategy, (iii) integrated risk management, (iv) risk knowledge, training and communication.



[a] Director in charge of the internal control and risk management system.

[b] Including objectives on the reliability of financial reporting.

[c] The Senior Executive Vice President Internal Audit reports hierarchically to the Board of Directors, and on its behalf, to the Chairman, without prejudice to his functional reporting to the Control and Risk Committee and to the CEO, as Director in charge of the internal control and risk management system.

Risk assessment in the Eni model:

- It is carried out by adopting metrics that take both the potential quantitative impacts (on net profit or cash flows as well as on production) and qualitative impacts (e.g., environmental, health and safety, social, reputation) into account.
- It provides for risk prioritisation with the use of multi-dimensional matrices so that the level of each risk is obtained by combining clusters of probability of occurrence and clusters of impact.
- It includes assessments at inherent level and at residual level, respectively before and after the mitigation actions are implemented.

INTEGRATED RISK MANAGEMENT PROCESS



Risk Governance, methods and tools: definition of criteria, procedures and tools for integrated risk management.
Risk strategy: contribution to defining Eni's medium and long term plans and Strategic Plan by identifying proposals for de-risking targets.
Integrated Risk Management: performance of periodic cycles of risk assessment and monitoring (Integrated Risk Assessment); analysis and management of contract risks (Contract Risk Management); integrated analysis of existing risks in Countries where Eni is present or of potential interest (ICR); support for the decision process for authorising investment projects and more important operations (Integrated Project Risk Management and M&A).
Risk Knowledge, training and communication: spreading of the risk culture and development of a risk knowledge management system.

During 2019:

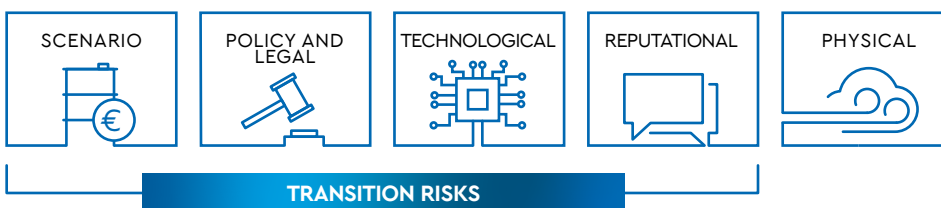
- two cycles of assessment were carried out: the Annual Risk Profile Assessment that involved 95 subsidiaries in 37 Countries in the first half, and the Interim Top Risk Assessment in the second half;
- approximately 160 risks were identified, 20 of which were top risks, grouped into strategic, external and operational risks⁷; climate change is one of Eni's top strategic risks analysed, assessed and monitored by the CEO as part of the IRM process;
- three monitoring cycles were performed on the top risks in order to analyse risk trends and the implementation status of treatment actions put in place by management;
- risk assessment methods and tools were reinforced to increase the effectiveness and efficiency of the process as well as the quality of the data.

The results of the assessment and monitoring cycles are presented to the Board of Directors and the Board of Statutory Auditors on a quarterly basis.

Risks assessed as top risks are those that impact on one or more strategic objectives and can lead to a broad review of business strategies

Risks and opportunities related to climate change

Climate change is analysed, assessed and managed by considering 5 key drivers relating to both transition risks (market scenario, regulatory and technological development, reputational issues) and physical risks such as extreme or chronic weather events. The analysis is carried out using an integrated and cross-cutting approach, which involves specialist departments and business lines and enables an assessment of the risks and opportunities related to climate change.



The risks and opportunities related to each driver are shown below. The mitigation actions are described in detail in the section on strategy and in the other sections of this document.

⁷) For additional information about the model, IRM and TOP Risk please refer to the [2019 Annual Report](#), pp. 20-23; for more information on climate Risk, please refer to [Eni for 2019 - A just transition](#) p. 16.

REFERENCE DRIVERS

LOW CARBON SCENARIO



In the International Energy Agency (IEA) Sustainable Development Scenario (SDS), used as a benchmark for assessing energy transition risks, fossil fuels are expected to retain a central role in the energy mix (Oil & Gas at 47% of the mix in 2040), although in this scenario the global energy demand by 2040 is expected to drop as compared to its present level (-7.2% vs. 2018, CAGR 2018-2040 -0.3%). Natural gas is expected to increase its share of the mix even in the SDS scenario (24% in 2040 vs. 23% in 2018). In fact, by virtue of its lower carbon intensity and improved environmental performances, it appears as the fossil fuel with the best future prospects both for integration with renewable sources and for replacement of other sources with higher environmental impacts, especially in emerging Countries. In the future, moreover, natural gas will be able to play an important role also in terms of growing

production of hydrogen or implementation of CO₂ capture, use and storage (CCUS) projects. Renewable sources will take on a growing importance in the progress towards decarbonisation, succeeding in satisfying 34% of primary consumption (vs. 14% in 2018), above all thanks to wind and solar energy. The demand for petroleum is expected to grow in the other IEA scenarios (Current Policies Scenario and Stated Policies scenario) while in the SDS scenario an immediate peak is expected to be reached in the next two years at global level with a subsequent reduction in consumption in almost all Countries (with the exception of India and Sub-Saharan Africa). Despite this, even considering the SDS scenario, the need for significant upstream investments to offset the decrease in production by existing fields remains.

POLICY AND LEGAL



Adoption of policies suitable to sustain the energy transition towards low carbon sources could have significant impacts on the business. Although COP25⁸ in Madrid ended without an agreement on the definition of the market mechanism rules for the Paris Agreement, a growing number of governments are announcing the revision of the 2030 goals and new long-term net zero emissions targets, showing greater interest in the development of low carbon content energy solutions. In particular, with the presentation of the new "European climate law", the European Union has set itself the target of defining carbon neutrality by 2050, in implementation of the proposal for a new European Green Deal, approved in January 2020.

The regulatory instruments also include the carbon pricing tax mechanisms, already adopted in some Countries/free trade zones, considered an effective solution from the economic

point of view for the purpose of containment of CO₂ minimising the cost for the general public. At present, about half of Eni's direct GHG emissions are subject to the European Emission Trading Scheme (ETS) regulations which provide for charges for purchase of emissions certificates on the open market, after exceeding the free assignment limit of shares established according to the regulations. In some operating areas, Eni is subject to carbon tax mechanisms (e.g. Norway). Regulatory developments on biofuels, including the new directive on renewable energies (RED II which will come into force as from 2021), will define the feedstocks that can be used for production, progressively privileging those that are not in competition with the food supply chain and those able to guarantee levels of GHG savings still higher than the reference fossil fuel.

TECHNOLOGICAL DEVELOPMENTS



The need to build a final consumption model for low carbon impact energy will favour technologies for GHG emissions capture and reduction, production of hydrogen from methane as well as technologies that support methane emissions control along the Oil & Gas production chain. These elements will contribute to sustaining the role of hydrocarbons in the global energy mix. On the other hand, technological developments in the field of production and storage of energy from

renewable sources could have impacts on the demand for hydrocarbons and therefore on the business.

REPUTATION



Awareness campaigns by NGOs and other environmental organisations, media campaigns, shareholder resolutions at Shareholders' Meetings, disinvestments by some investors, and class actions by stakeholder groups are the methods with which Oil & Gas companies are requested to employ increasingly greater transparency on the energy transition. Additionally, some public and private parties have begun proceedings, legal or otherwise, against the major Oil & Gas companies, including companies belonging to the Eni Group, accusing them of responsibility for the impacts related to climate

change and human rights. Eni has long been committed to promoting a constant, open and transparent dialogue on climate change issues, which are an integral part of its strategy and are therefore communicated to all stakeholders. This commitment is part of a broader relationship that Eni has been building and is committed to strengthen with its stakeholders on sustainability issues through initiatives on governance issues, dialogue with investors and targeted communication campaigns, participation in initiatives and international partnerships.

PHYSICAL RISKS FOCUS



Intensification of extreme/chronic weather phenomena in the medium-long term could cause damage to plants and infrastructures, resulting in an interruption to industrial activities and increased recovery and maintenance costs. The assets in the current Eni portfolio are designed according to

current regulations to withstand extreme environmental conditions and are distributed over a wide geographical area, such as not to determine significant risks. The exposure of Eni assets to phenomena may have more gradual impacts, such as rises in sea levels or coastal erosion, also prove to be limited,

8) The COVID-19 health emergency has forced the UN to postpone COP26 scheduled from November 9 to 18, 2020 in Glasgow, organised jointly by the United Kingdom and Italy. The postponement to 2021 will allow Parties to devote more time to the preparations required for an effective COP26.

RISKS	OPPORTUNITIES	ENI RESPONSE ACTIONS <small>(in-depth information in subsequent sections of the document)</small>
<ul style="list-style-type: none"> • Decline in global hydrocarbon demand • Loss of results and cash flow • “Stranded asset” risk • Impacts on shareholders’ returns 	<ul style="list-style-type: none"> • Growth in gas demand and opening up of new market opportunities (such as LNG - Liquefied Natural Gas) • Development of renewable energies • Diversification of raw materials for biorefineries and the chemical industry and development of new products • Opportunities for CCS development 	<ul style="list-style-type: none"> → Resilient and flexible oil & gas portfolio → Industrial scale renewable energy projects → Biorefineries → Sustainable mobility and biofuels → Retail business development → CCS - carbon capture and storage → Forestry → Chemistry development with a circular approach
<ul style="list-style-type: none"> • Increase in operating and investment costs • Declining demand for oil products • Climate change proceedings 	<ul style="list-style-type: none"> • Development of renewable energies • Diversification of raw materials for biorefineries and the chemical industry and development of new products • Recovery of assets in a circular long term perspective • Replacement of the demand for coal with gas 	<ul style="list-style-type: none"> → Resilient and flexible oil & gas portfolio → Industrial scale renewable energy projects → Biorefineries → Sustainable mobility and biofuels → Chemistry development with a circular approach → Climate disclosure e positioning
<ul style="list-style-type: none"> • Reduction in hydrocarbon demand through technological breakthroughs 	<ul style="list-style-type: none"> • Development of renewable energies • Development of technologies for the recovery and reuse of waste • Partnerships for the development of technological solutions to cut emissions 	<ul style="list-style-type: none"> → Research and development in the energy transition → Industrial scale renewable energy projects → Biorefineries → Sustainable mobility and biofuels → Chemistry development with a circular approach → CCS - carbon capture and storage
<ul style="list-style-type: none"> • Impacts on stakeholder perceptions • Impacts on share price 	<ul style="list-style-type: none"> • Continued leadership in disclosure • Partnerships 	<ul style="list-style-type: none"> → Research and development in the energy transition → Climate disclosure and positioning → Partnerships for carbon neutrality in the long term

and therefore it can be assumed that they can be dealt with by preventive mitigation action. In addition to the commitment to guarantee the integrity of its operations, Eni is active on the subject of adaptation to climate changes for social and environmental impacts too, with particular focus on assessment of the main vulnerabilities linked to physical risks and on

development of suitable guidelines for completing adaptation actions in the Countries of interest (please see “Eni’s commitment to adaptation to climate changes” on p. 37). For more information on physical risks, see [Eni for 2019 - A just transition](#) “Efficient Water Use” on pp. 36-37 and “Biodiversity” on pp. 40-41.

Strategy



Eni has developed a methodology for the measurement of all absolute GHG emissions, including all Scope 1, 2 and 3 emissions

Eni strategy

Following a phase of great transformation that began in 2014, which has allowed the Group to grow and diversify its portfolio, at the same time strengthening its financial organisation, Eni is ready for a new phase in the development of its business model which, strongly oriented towards the creation of long-term value, combines economic/financial and environmental sustainability. Eni's strategy couples the goals of continuous development in a rapidly changing energy market with a significant reduction of the Group's carbon footprint. In the future, Eni will be even more sustainable, it will have a stronger role as a global player in the world of energy that will be enhanced by the progressive development of the renewables business and by new businesses based on circularity.

This evolution will come about thanks to the Long-Term Industrial Plan that Eni announced in February 2020 and which, by exploiting know-how, proprietary technologies, innovation and also the flexibility and resilience of assets, will make it possible to seize new opportunities for development and efficiency, as well as further improving safety in the workplace.

The basic principles that inspire and guide the activities and actions of the Long-Term Plan are:

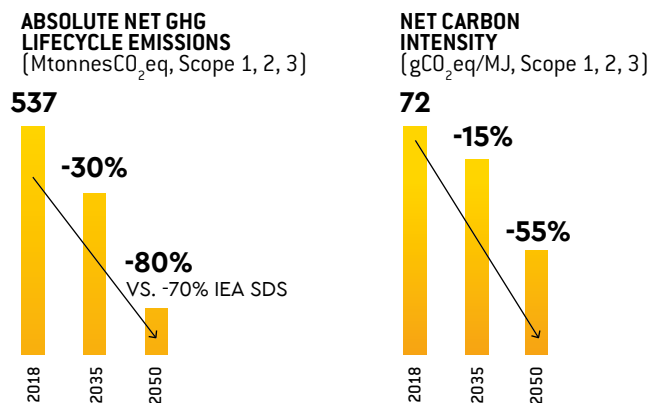
- actively contributing to achieving the United Nation's 17 Sustainable Development Goals (SDGs), on which Eni's mission is based;
- maximising integration of the portfolio all along the value chain, from production to end customers;
- guaranteeing strict financial discipline in investment policies and a sound Group capital structure in support of cash flow generation;
- maintaining a progressive shareholder remuneration policy.

These principles have been used as the basis for defining operating strategies and goals up to 2035 and to 2050, which outline the integrated development process of the individual businesses. The speed of the evolution and the related contribution of the businesses will depend on the market trend, the technological scenario and the reference regulations.

The evolution of the business portfolio will have a significant impact on carbon footprint reduction, the goals of which have already been set. In particular, Eni will pursue a strategy that aims to:

- obtain an 80% reduction by 2050 in net emissions referable to the whole life cycle of the energy products sold by 2050, including Scope 1, 2 and 3 emissions (higher than the 70% threshold indicated by IEA in the SDS scenario compatible with the goals of the Paris Agreement) and a 55% reduction in emissions intensity compared to 2018;
- strengthen its role as a global player in the energy market, by exploiting an increasingly more balanced and integrated portfolio mix of its assets;
- making the very most of the flexibility of its assets portfolio, able to respond to external market factors and at the same time ready to exploit opportunities to the maximum;
- generating value for its shareholders by maintaining the current policy for progressive remuneration.

GHG lifecycle emissions Scope 1, 2 and 3 emissions associated with the activities and products along their value chain



All business net zero Scope 1+2 carbon footprint by 2040.

In order to monitor achievement of the goals for reduction of GHG emissions, Eni has developed a strict methodology for an all-inclusive evaluation of GHG emissions. This methodology includes all Scope 1, 2 and 3 emissions, in absolute and relative terms, linked to the energy products sold, whether they derive from equity or non-equity productions. This distinctive approach exceeds the current standards for measurement of emissions and provides an integral vision of the Group's carbon footprint. The methodology has been reviewed by independent experts at the Imperial College London (through Imperial Consultants) while the result of its application has been verified by RINA, an independent certification company (for further information, see "The new value chain approach" pp. 18-19).

The actions that will contribute to achieving these results are:

- progressive reduction of hydrocarbon production after 2025 and the growing incidence of gas production;
- focus on marketing of equity products and progressive reduction of marketing of non-equity gas;
- conversion of European refineries to plants fuelled by bio or alternative materials, for the production of hydrogen, methanol, biomethane and products from recycling of waste materials;
- creation of primary and secondary forest conservation projects to compensate CO₂ emissions equivalent to 30 million tonnes/year by 2050;
- development of CO₂ capture and storage projects worth 10 million tonnes/year by 2050 and a project already under study at the Ravenna hub in Italy, where it will be possible to store the CO₂ captured from neighbouring industrial sites and plants generating electricity from gas into the now depleted offshore Adriatic gas fields;
- achieving a capacity for production of energy from renewable sources in excess of 55 GW by 2050;
- expansion of retail activities with the goal of reaching over 20 million supply and distribution contracts for "bio" and renewable products only by 2050.

Additionally Eni has confirmed and further extended intermediate decarbonisation goals: net zero carbon footprint by 2030 for Scope 1 and 2 emissions from upstream activities and net zero carbon footprint for Scope 1 and 2 emissions from the Eni Group by 2040.

Overall spending in the four-year period 2020-23 for decarbonisation, the circular economy and renewables is approximately €4.9 billion and it includes scientific and technological research activities designed to support these issues.

**Scope 1
GHG Emissions**
Direct greenhouse gas emissions from company's operations

**Scope 2
GHG Emissions**
Indirect greenhouse gas emissions resulting from the generation of electricity, steam and heat purchased from third parties and consumed in assets

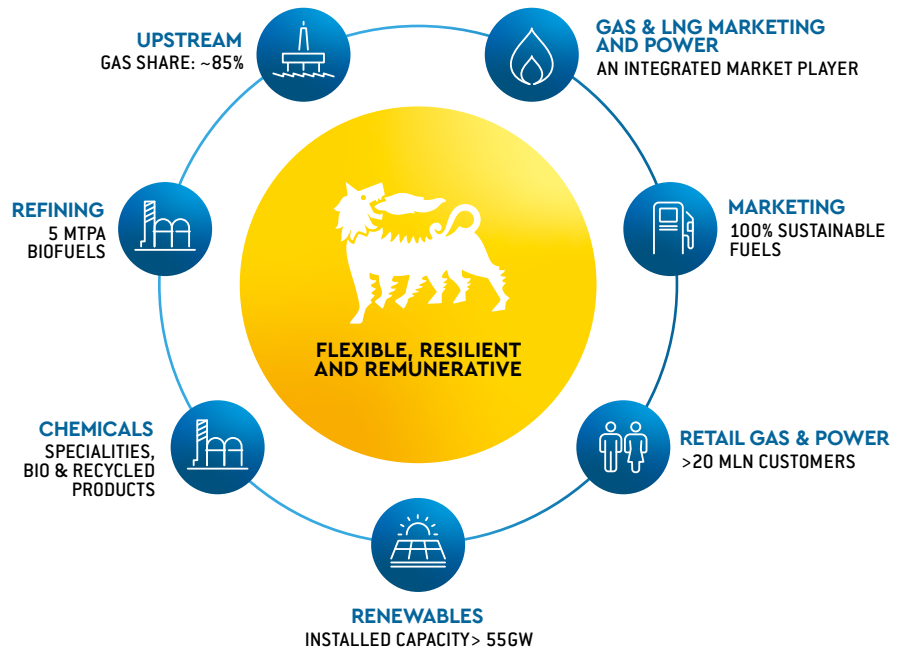
**Scope 3
GHG Emissions** Indirect emissions associated with Eni products along their full value chain



Panel of the Gela pilot plant realized as part of the Eni CSP-Concentrated Solar Power project

GOALS BY 2050

GHG LIFECYCLE EMISSIONS REDUCTION



Eni will pursue a strategy that aims to strengthen its role as a global player in the energy market, by exploiting an increasingly more balanced and integrated portfolio mix of its assets

- **UPSTREAM**

- Maintenance of the resilience of the current exclusively conventional asset portfolio characterised by low break-even, accelerated time to market and limited exposure beyond the medium term;
- Optimisation of the flexibility of the portfolio with a production increase confirmed at a CAGR of 3.5% up to 2025, the year when production will plateau followed by a flexible decreasing trend mainly in oil. The forecast production mix remains confirmed, with gas share of 60% by 2030 and around 85% in 2050;
- All the goals related to reductions of GHG emissions previously announced are confirmed.

- **RENEWABLES**

- Progressive expansion of installed global capacity to over 55GW by 2050;
- Selection of areas of expansion linked to the presence of Eni customers and their growth so as to maximise the value of the integrated model;
- Continued development activities in area where Eni already operates.

- **GAS & POWER**

- Expansion of retail activities with the goal of reaching over 20 million supply and distribution contracts for products by 2050;
- Expansion linked to the expected growth of energy generation from renewable sources and biomethane;
- Goal of distributing only "bio" and renewable products by 2050;
- Next-generation services integrated with traditional offer to our costumers;
- Strengthening of the role of Midstream Gas & Power by access to markets of all the Group's non-oil commodities;
- Focussing of Midstream Gas & Power activities on marketing of equity products: gas, biomethane, blue energy and hydrogen;
- Confirmation of Midstream's role as operator of plants for generation of electricity from gas, integrated with projects for CO₂ capture and storage.

• REFINING & MARKETING

- Expansion of biorefining capacity to over 5 million tonnes per year, supplied exclusively with sustainable feedstocks, from recycled and advanced carbon in target areas such as the Far and Middle East, Europe for the production of biojet fuel and the United States;
- Progressive conversion of traditional Italian refining sites into new plants for production of hydrogen, methanol, biomethane and products from recycling of waste materials (like recycled carbon fuels);
- In the long run, the Ruwais refinery in the United Arab Emirates will be the only traditional refinery in operation, capitalising on its optimal geographic position and operational efficiency;
- Gradual evolution of the product mix sold in retail outlets, reaching 100% decarbonised products by 2050;
- Increase of additional services offer to improve margins and enhance customer loyalty.

• CHEMICALS

- Specialisation in the production of high-quality and high-performance polymers;
- Development and integration of chemicals from renewables and chemical and mechanical recycling;
- Transformation via pyrolysis of non-recyclable plastics into polymers with identical characteristics to those produced with hydrocarbons;
- Establishment of integrated platform to exploit synergies with refining in gasification processes involving all types of plasmix.

In the future, Eni will have a stronger role as a global player in the world of energy that will be enhanced by the progressive development of the renewables business and by new businesses based on circularity



ENI'S COMMITMENT TO ADAPTATION TO CLIMATE CHANGES

As part of the policies for fighting climate changes, adaptation strategies play a role as important as that of mitigation. Eni also operates in geographical contexts that are particularly exposed to extreme weather events which may have effects both on ecosystems and on populations (e.g. loss of biodiversity, desertification and water stress, migrations and famine) as well as having direct and indirect impacts on industrial assets. During 2019, Eni launched the project "Adaptation to climate changes. Risks and opportunities linked to Climate Changes in Countries of interest to Eni" with the cooperation of the Eni Enrico Mattei Foundation (FEEM) and the Scuola Superiore Sant'Anna .

The goals of this project are to set down guidelines and adaptation measures addressed to the industrial activities and to Countries of interest to Eni, also from the viewpoint of business continuity and the contribution to the local development of communities.



As part of the policies for fighting climate changes, the adaptation strategies play a role as important as that of the mitigation strategies



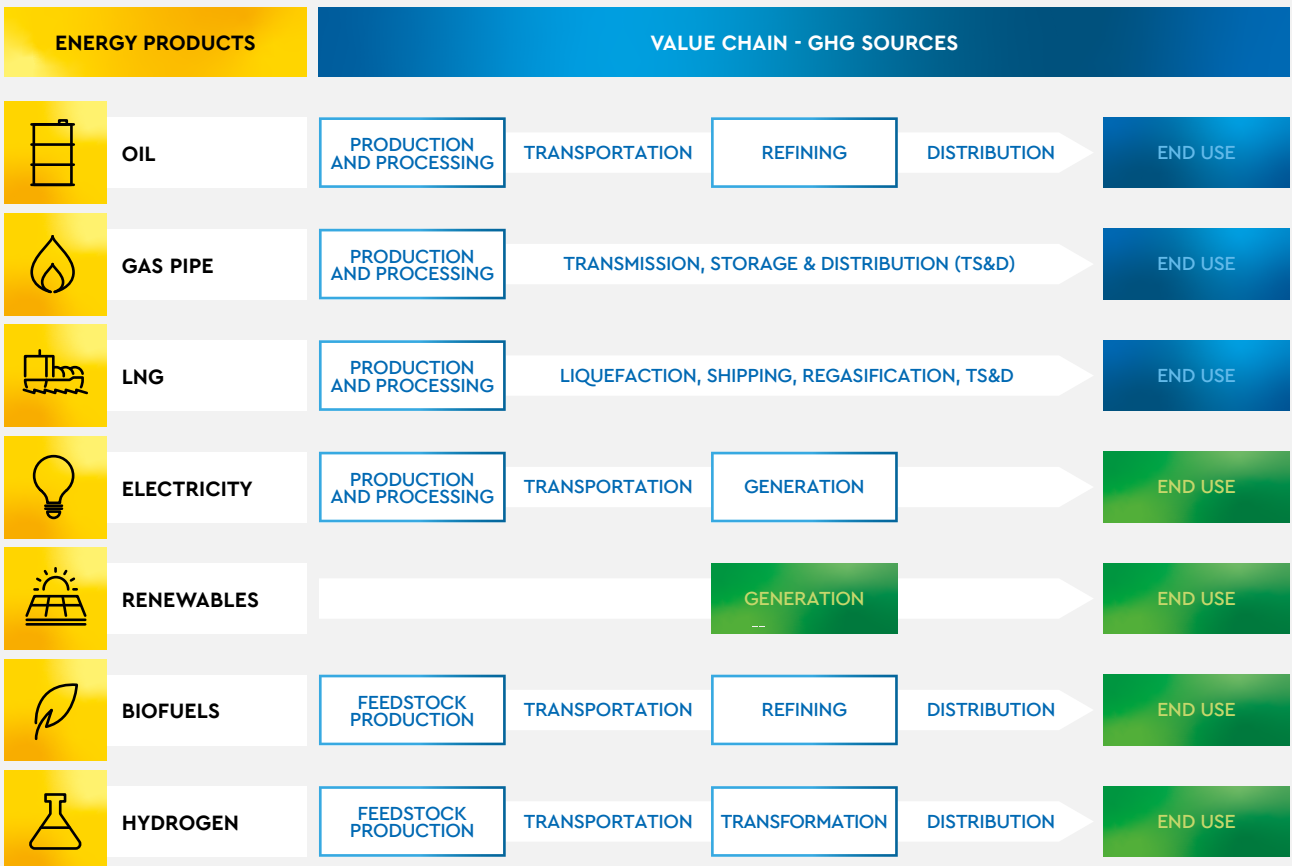
New methodology reviewed by independent experts at the Imperial College London (through Imperial Consultants) while the result of its application has been verified by RINA, an independent certification company

THE NEW VALUE CHAIN APPROACH

The new targets announced by Eni during the strategy presentation for the reduction of its carbon footprint refer to a distinctive accounting method for GHG emissions along the whole value chain of the energy products sold by Eni. Indeed, it is well known that most GHG emissions associated with the Oil & Gas industry supply chain is due to activities not directly operated by the companies (known as Scope 3). Of these, the most important part is due to end use of energy products, for which international reference protocols do not indicate an unequivocal estimation methodology that allows a concise and comparable representation of GHG emissions. In this context, Eni has adopted a new approach to emissions reporting, based on life cycle analysis as the most suitable and representative tool for tracing its progress towards carbon neutrality.

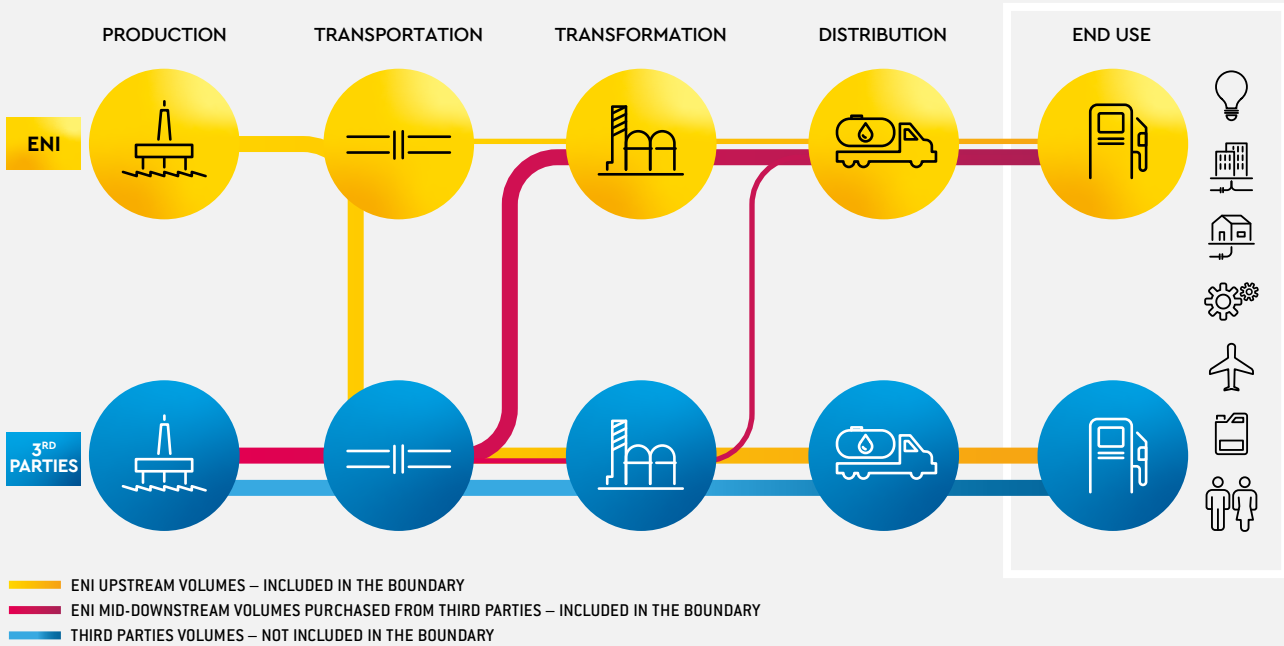


This methodology includes all GHG Scope 1, 2 and 3 emissions, in absolute and relative terms, linked to the energy products sold, whether they derive from equity or non-equity productions. An approach that therefore includes all energy products managed by the various Eni businesses and all the emissions that they generate along the whole value chain. This list includes conventional oil products, electricity, but also new bio products originating from new businesses developed with a view to circularity. For each of these products, the methodology envisages inclusion of all material sources of GHG emissions generated along their value chain, according to a well-to-wheel approach.



GREEN SHADED ELEMENTS ARE CONSIDERED CARBON FREE

The volumes of energy products considered are quantified based on an extended perimeter, which includes both equity productions and volumes purchased from third parties, as stated in the example diagram for the oil value chain:



All the emissions generated along the value chain of the products, produced by Eni and by third-party plants are included.

Products purchased from third-parties and the emissions they generate in the production, transport and transformation phases at Eni and third-party plants are also included.

Based on this methodology, Eni has defined three new indicators, to quantify and measure progress towards our decarbonisation targets:

- 1. NET CARBON FOOTPRINT**
 Overall Scope 1 and 2 GHG emissions, associated with Eni operations, net of carbon sinks.
- 2. ABSOLUTE 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 sinks, are considered.
- 3. 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.





INTERVIEW WITH ANNA KORRE, ENERGY FUTURES LAB - IMPERIAL COLLEGE



Anna Korre

Professor of
Environmental
Engineering,
Imperial College London,
Co-Director,
Energy Futures Lab
Working independently
via Imperial Consultants

ASSESSING O&G SECTOR PERFORMANCE THROUGH THE ENERGY TRANSITION

There is wide recognition of the strategic role of the O&G sector in the energy transition, evolving their business for supplying low-carbon energy. It has been a year of important announcements by many Companies, do you see a new approach in decarbonisation strategies?

The reality of climate change is posing hard choices for companies and societies alike. I believe that for those companies that embrace change, what is good for the planet can also be good for them. With particular reference to the O&G sector, in most cases only a small fraction of GHG emissions result from direct O&G production operations, with the majority generated outside the Company facilities and related to the final use of the energy products. This means that in order to meet decarbonisation targets, the O&G companies need to extend the perspective of their strategic announcements, beyond the traditional own-business targets, towards addressing indirect emissions. The energy sector as a whole is indeed moving in this direction, although more needs to be done. The main difficulty here is to do with sharing of sensitive market segment information and issues surrounding competition. This difficulty is of course valid for all industry sectors, not just the energy sector.

Considering the complexity of the O&G business, what are the challenges for accurate emissions accounting and transparent disclosure?

Most companies currently rely on engineering estimations for direct GHG emissions accounting of their controlled operations. Where these are combined with monitoring of emissions and verification is implemented, accounting can be reasonably robust and accurate. In many cases, however, it is not clear if reported emissions are based on company-specific facility characteristics and the product chains they cover. Moreover, regarding indirect emissions accounting, there is still lack of clarity and comparability of reported emissions and the performance assessment methodologies used. Recognising that communication of these specifics is necessary to raise confidence and earn the trust of stakeholders, Eni has chosen to deploy a GHG accounting methodology based on a lifecycle analysis approach, that considers all of their traded products across business sectors. This is important and a step change.

Which are the distinctive features of Eni's methodology, and are there aspects that need to be improved or developed further? Do you think that a collective engagement of Companies from the O&G sector may be beneficial in that regard?

Eni's methodology for the assessment of GHG emissions along their product chains aims to tackle a difficult problem. The company profile is such that different energy raw materials and types of production chains are engaged in delivering a multitude of products. These products are then used in society to supply a wide range of energy services. Moreover, outside Eni's own activities, the company also trades third party products across the world, over which the company has less control and for which less evidence is available. These difficulties pose significant challenges in accurate emissions accounting.

The methodology developed by Eni indicates that a coherent and reasonably accurate assessment framework for GHG emissions accounting has been implemented across Eni's product chains.

As a first attempt, it is recognised that this methodology contains elements that are covered in good detail, and many that are reasonably accurate and with low uncertainty. It also contains few that need to be improved upon. Noteworthy is that the boundary of systems studied for Eni's products is wider. This is an important improvement upon similar life cycle net carbon intensity calculation metrics proposed by other companies in the oil and gas sector.

A reasonably accurate and up-to-date record of a company's performance is evidence that can be used to track performance over time and verify that its engagement in the energy transition is genuine. As such, the collective engagement of Companies from the O&G sector in the process is critical. Specifically for Eni, their choice supports positively the company's stated vision to supply essential energy and materials for a sustainable society.

RESILIENT AND FLEXIBLE OIL & GAS PORTFOLIO

PORTFOLIO RESILIENCE

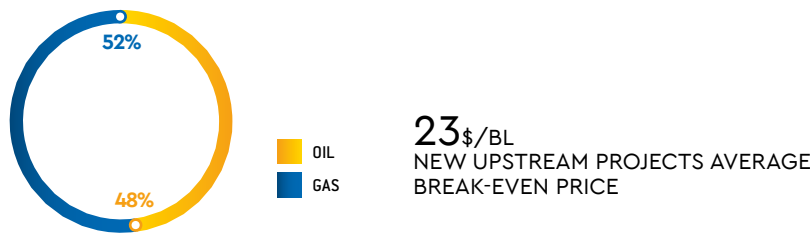
Eni pursues its decarbonisation strategy with an oil&gas portfolio characterised by conventional low carbon intensity projects. With the adoption of a model of operating excellence based on exploration of success at competitive costs, reduction of time-to-market of the reserves, an approach to project development by phases and the continuous control of operating expenditure, Eni has built up a resilient oil&gas portfolio. Today, in fact, the main upstream projects in progress present a break-even of 23 \$/bl (25 \$/bl in the previous plan) and an overall internal rate of return (IRR) of around 25%. These projects remain competitive even in low carbon scenarios. The resilience of the investments portfolio is in fact measured through a monitoring process aiming at identifying and assessing the potential risks deriving from the market scenario and from legislative and technological evolution. The profitability of the most important new investment projects is subjected to a sensitivity to carbon pricing using two sets of assumptions:

- Eni's hydrocarbon price and CO₂ cost scenario;
- assumptions on hydrocarbon price and CO₂ cost used in the IEA SDS scenario.

In particular, by adopting the IEA SDS scenario, which envisages the global application of a steeply rising cost for direct CO₂ emissions, the overall IRR would be reduced by 0.7 percentage points.

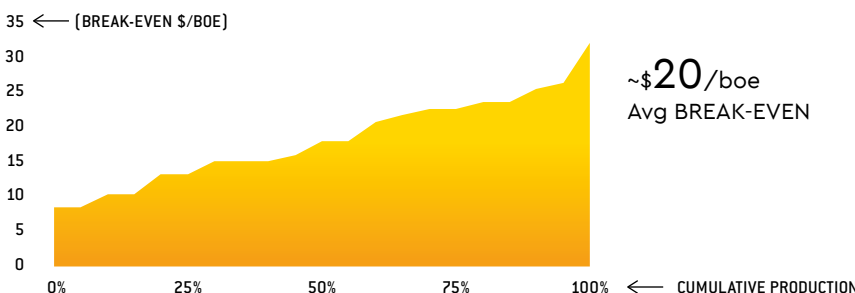
Eni pursues its decarbonisation strategy with an Oil & Gas portfolio characterised by conventional low carbon intensity projects

OIL & GAS RESOURCES (%)



The resilience of Eni's asset portfolio also reflects the sensitivity analysis to which the upstream CGUs⁹ (Cash Generating Units) are subjected. The stress test conducted on the IEA SDS scenario has shown the overall stability of the book values of the assets with a 7% reduction of the fair value assuming non-deductibility of the costs of CO₂ emissions, that is 2% in the event of recognition of the contractual and fiscal recoverability of CO₂ charges. Analysis of the production profile for the 3P reserves fully demonstrates how resilient and flexible the current Eni portfolio is. The average break-even Brent price, meaning the price that guarantees a return on investment equal to the capital cost, is 20 \$/bl, with a range varying from values below 10 \$/bl up to only 35 \$/bl for the most costly reserve. This means that all the reserves in portfolio may be produced profitably at 35\$/bl generating an overall return significantly higher than the capital cost. In terms of flexibility, it can be seen that even in a sensitivity scenario with a constant Brent price of 50 \$/bl and a billing point price for gas of 5 \$/mmbtu, 94% of the value and 85% of the volumes of Eni 3P reserves currently in portfolio could be produced by 2035. This leaves ample freedom to plan exploration and development campaigns in support of future production to adapt to sudden changes in market conditions, including changes in legislation and technological breakthroughs, without running the risk of stranded asset.

EXISTING 3P RESERVES



9) The analysis perimeter includes only the CGUs subject to impairment testing pursuant to IAS 36.

GAS SHARE

60% @ 2030 85% @ 2050

Gas share ~85%
in the production
mix in 2050

THE ROLE OF GAS

Eni strategy provides for a profile of progressively rising production with an increasing CAGR up to 2025, the year when it will plateau, followed by a downward trend mainly in oil. Gas will therefore take on an increasingly important role in the future of the Company with the aim of targeting a 60% share of the production mix by 2030 and around 85% by 2050.

LNG also plays a crucial role in the growth of gas and Eni is developing a new model to achieve a leading position in the market. Over the next few years, the portfolio is expected to grow with forecast traded volumes of 14 MTPA¹⁰ to 2022 and up to 16 MTPA to 2025, with a significant increase over the traded volumes in 2019 (9.5 MTPA).

These actions contribute to make the portfolio of the Group more sustainable and exploit the fossil fuel with the fewest GHG emissions as a bridge fuel for the long-term energy transition. Use of technological solution like Carbon Capture and Storage applied to electricity generating plants, LNG plants and for production of blue hydrogen will make it possible to reduce the carbon footprint of gas originating from equity production.

To this end, aware of the importance of maximising the benefit to the climate deriving from using gas, Eni is a partner in various initiatives¹¹ that provide for implementation of voluntary actions to reduce methane emissions throughout the whole Oil & Gas production process and that promote the implementation of regulations and targets for reduction of methane emissions along the natural gas supply chain. Eni also supports actions for the introduction of mechanisms (e.g. EPS at European level) that favour the use of fuels with lower emissions intensity and consumption of natural gas.

The progressive mitigation of its carbon impact makes gas a fundamental energy source for accompanying the transition towards a low carbon content energy mix also thanks to substitution of the more polluting fossil fuels in electricity generation and in energy-intensive industries. It will also contribute to guaranteeing the balancing of the electric system by integrating the intermittance of renewable sources.

Characteristics of gas as the chosen fuel in a decarbonisation scenario

LOWER GHG EMISSIONS AND CLEAN FUEL

Natural gas is the fossil fuel with the lowest GHG emissions, if considered over the entire life cycle. Additionally, natural gas is the fuel with the lowest emissions of pollutants.

ABUNDANT AVAILABILITY

Current production levels cover more than 50 years with the proven world reserves and more than 220 years with technically recoverable resources.

SECURE PROCUREMENT

Europe is developing an interconnected infrastructure which will enable to be supplied by multiple sources, guaranteeing greater resilience against any emergencies.

Another important aspect connected with promotion of gas in Eni's strategy is linked to the development of projects close to growing markets, in emerging Countries and with expanding energy needs, in particular in Sub-Saharan Africa where over half a billion people today, and it is expected until 2030, do not have access to electricity, despite the large availability of energy sources (gas resources sufficient to cover current consumption for 800 years). Eni is committed to researching and developing energy resources for local markets and to projects aimed at access to energy and energy mix diversification with low impact sources such as gas and renewables (for more information, see [Eni for 2019 - A just transition](#), pp. 54-55).

10) Million tonnes per year.

11) Please see Partnership section.

INDUSTRIAL SCALE RENEWABLE ENERGY PROJECTS

Eni's medium to long-term strategy foresees the progressive global expansion of the renewables business up to an installed capacity of over 55GW by 2050, by selecting areas of expansion linked to the presence of Eni customers and to their growth, in order to maximise integration. In 2019, Eni continued its commitment to development of the renewable energy business which began in 2015 with the creation of the Energy Solutions Department (DES) reporting directly to the CEO.

The installed capacity reached almost 170 MWp at the end of 2019, increasing the installed capacity at the end of 2018 (40 MWp) more than fourfold; projects developed in Italy contributed for almost 50 MWp to this increase, while those developed abroad contributed for 80 MWp. As part of Progetto Italia, the photovoltaic field at Porto Torres, with a capacity of 31 MWp was completed and put into production; it is the largest plant to date built and put into production by Eni.

In addition to continuing initiatives to upgrade its own disused industrial areas as part of Progetto Italia, Eni has considerably expanded the geographical horizons of its business beyond national borders, starting up production at the first two photovoltaic plants abroad: in Pakistan, a 10 MWp photovoltaic plant intended to supply "green" energy to the Bhit gas field and in Algeria a 10 MWp plant (5 MWp Eni share) to contribute to the energy needs of the BRN field (both concessions operated by Eni).

Furthermore, again in 2019, the following plants were completed:

- the Adam plant in Tunisia (5 MWp with energy storage, 2.5 MWp Eni share) which will power the facilities at the Adam oilfield operated by Eni;
- the photovoltaic plant at Katherine in Australia with a capacity of 34 MWp and energy storage;
- 70% of the Badamsha wind farm in Kazakhstan, which is also an absolute first for Eni, with a total capacity of 50 MW (completed in February 2020).

Production at all these plants will be started in the early months of 2020.

Also worth mentioning is the award of contracts for two additional projects in Kazakhstan following auctions held at the end of 2019, for the construction of another 48 MWp wind farm at Badamsha and a 50 MWp photovoltaic plant in the south of the Country.

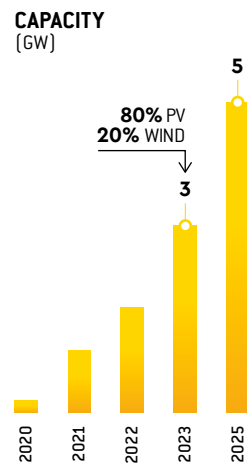
The initiatives completed in 2019 confirm the validity of Eni distinctive model based on:

- integration with other business lines and existing assets, generating value through industrial, logistical, contractual and commercial synergies;
- a gradual geographical balance with a focus on the Countries in which Eni has a consolidated presence, solid commercial relations, knowledge of the energy markets and local needs;
- a technology neutral approach due to the close cooperation with the R&D function, which will enable the introduction of innovative technological solutions that are currently being studied.

In this scenario, the partnerships concluded with Mainstream Renewable Power for the development of projects in the offshore wind power sector, with Falck Renewables for development of projects in the USA and with Cassa Depositi e Prestiti for activities in Italy, also play an important role.

Eni's medium to long-term strategy provides for the progressive global expansion of the renewables business up to an installed capacity of over 55GW by 2050

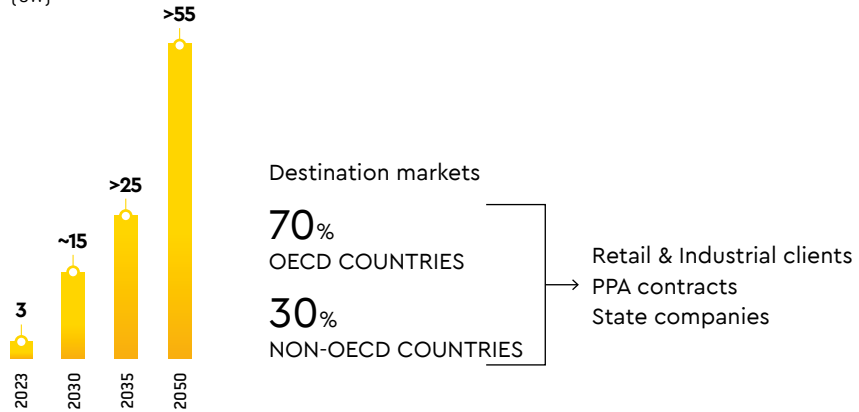
€2.6 BLN
CAPEX 2020-2023



In 2019 Eni completed the construction of the Badamsha wind farm in Kazakhstan, with a total capacity of 50 MW

For the coming years, Eni confirms the strategic importance of the renewable energy business, foreseeing over the next four years a growing commitment with an investment of €2.6 billion and an installed electricity capacity from renewable sources of 3 GW by 2023. This capacity is set to reach 5 GW in 2025 with the ambition of reaching around 15 GW by 2030 and over 25 GW by 2035.

INSTALLED CAPACITY
(GW)



The Inertial Sea Wave Energy Converter converts the energy of sea waves into electricity

ISWEC – THE CRADLE OF ENERGY

The ISWEC system, developed by Eni R&D with Wave for Energy Srl, a spin-off of the Politecnico di Torino, converts the energy of sea waves into electricity, making it immediately available for off-shore plants or feeding it into the electricity grid to provide power to communities along the coasts. The full name is Inertial Sea Wave Energy Converter and it consists of a sealed floating hull containing a pair of gyroscopic systems, connected to two generators. The waves cause the unit to pitch; it is anchored to the ocean floor, but free to move and oscillate. This pitching movement is intercepted by the two gyroscopic systems which are connected to the generators, and these in turn transform it into electricity. A simple solution, with cutting-edge technology at its heart. The first pilot plant is already active in Ravenna, and is connected to our PC80 platform and integrated with a photovoltaic system and this first version has succeeded in producing 105% of its nominal power of 50 kW; Eni is working in partnership with Fincantieri, Terna and Cassa Depositi e Prestiti on an industrial model with a higher capacity.

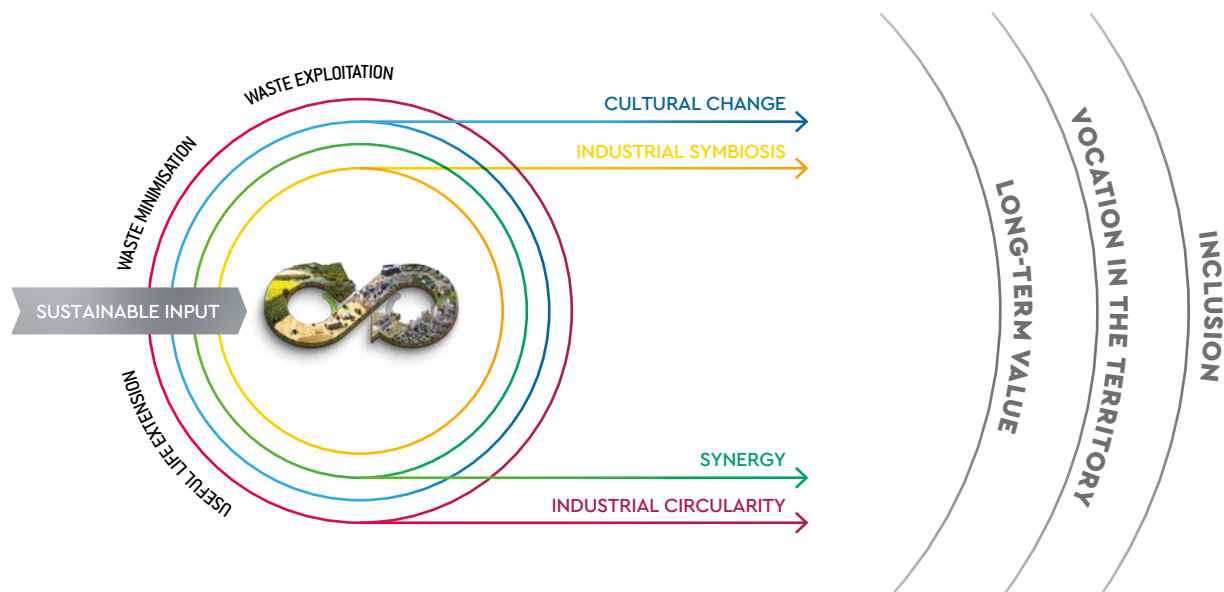


FOR FURTHER INFORMATION: [ISWEC, the cradle of energy on eni.com](https://www.eni.com)

CIRCULAR ECONOMY

The circular economy model overtakes from the linear development model, based on high intensity production and consumption of energy and natural resources, in which products, at the end of their life cycle, become waste. The evolution towards a circular economy model represents an opportunity for change which, by protecting natural capital, pursues sustainable development towards a low-carbon economy, able to adapt and respond suitably to an increasingly complex socio-economic-environmental context. Eni's circularity is integrated into the strategy of all its business units. The goal is long-term business sustainability, which can only be achieved by full efficiency from the economic, technical-operating and environmental point of view. Eni research is playing a key role by realizing product and process innovations that are sustainable and can be used on industrial scale, as demonstrated by Eni patents.

Eni's circularity is integrated into the strategy of all its business units



The mainstays of Eni's circularity strategy are:

- Sustainable raw materials: that is processing increasingly less virgin inputs and moving towards the use of materials of biological origin or derived from production process waste;
- Reuse, recycling and recovery: by processes for raw material recovery from waste products and reuse of water and land, as well as the recovery of waste; and
- Extension of useful life: giving new life to assets with a view to sustainability. Initiatives such as the conversion of refineries into biorefineries, which reintroduce areas and workers otherwise likely to be put out of the market area moves in this direction.

Through its downstream platform, Eni is in the best position to exploit the circular model thanks to its existing owned conversion plants, consolidated skills in the industrial sector, technologies, innovative research and the geographical distribution of its assets. A transformative attitude and the circularity platform are, for Eni, the basis for reinforcing a change already based on long-term relationships with local stakeholders, on the attention to the specificity of local communities and on listening to, and the inclusion of, stakeholders in advancing the new development model.

Eni's transformation began in the refining sector, with the first conversion of a conventional refinery into a biorefinery, in Venice, by using proprietary technologies followed in 2019 by transformation and start-up of a second conventional refinery into a biorefinery in Gela. This latter plant recalls the scheme of the first model, enhancing its sustainability performance and making it the most innovative biofuel production plant in Europe, which can use feedstock that comprises up to 100% secondary raw materials. Further actions have been developed in the area of conversion of waste into new energy products, thanks to proprietary technologies like Waste To Fuel. In the chemicals sector, Eni has created new processes and products which, through polymers recycling, valorize waste plastic materials by transforming them into secondary raw materials and which maximise the efficiency of the resources throughout their life cycle through feedstock diversification and eco-design.

It's fundamental to develop synergies with the territory where Eni operates, in order to optimise the use of products, matter, water and energy to promptly identify the opportunities as well as the need for technological innovation and new cultural models that are decisive for ensuring a lasting and sustainable development

In this perspective, it is increasingly more central the development of synergies with the territory where the company operates, in order to minimise and optimise the use of products, matter, water and energy and promptly identify opportunities as well as the need for technological innovation and new cultural models that are decisive for ensuring a lasting and sustainable development. This includes Protocols and cooperation agreements for the development of the circular economy in Italy with various companies for the collection of used cooking oils and the supply of biofuel HVO, such as those signed in the last two years in Rome with AMA, with Veritas in Venice, with Hera in Modena and with AMAT in Taranto. In 2019, Eni signed over 20 circular economy and sustainable mobility protocols with key players in the national and international socio-economic fabric.

During 2019, Eni also promoted projects focussing on maximising synergies through two initiatives, one involving small and medium sized enterprises (Circular Networking Day) and one with consumer associations (Circular Lab). The Circular Networking Day, organized in cooperation with Confindustria (Confederation of Italian Industry) and Maker Faire, aims to create opportunities for development through ecodesign, extending life of products and exploiting waste and rejected materials. The Circular Lab, in cooperation with the Sant'Anna School of Advanced Studies in Pisa, is a workshop held by Eni and Consumer Associations to analyse the ability of consumers to guide entrepreneurs' choices and the role of post-consumption behaviour in order to incentivize development of circular economy circuits by making use of the whole life cycle of processes and products.

ENI AND COLDIRETTI

The partnership with Coldiretti (National Farmers Federation), signed in 2019, establishes important areas of cooperation related to the circular economy. Eni and Coldiretti will assess joint initiatives for making use of agricultural biomasses for production of advanced biofuels for the energy and biochemicals sector. Research and promotion in Italy and abroad of crops that do not compete with the food chain, for production of alternative feedstocks for biorefineries will be promoted. The cooperation process also includes communication and awareness-raising campaigns on issues such as environmental and alimentary sustainability that were launched in the Coldiretti Villages and during the Circular Tour, a journey that began in Gela and stopped in some charming Italian towns.

ENI AND COREPLA

In March 2019, Eni signed an agreement with Corepla (the Italian consortium for collection, recycling and recovery of plastic packaging) with the aim of starting research projects into hydrogen production from plastic packaging waste. In October 2019, at the offices of Eni and Versalis in San Donato Milanese, the Ri Vending pilot project was launched, thus increasing the collection and recycling of polystyrene that can be used for the new line of products called Versalis Revive EPS, containing a percentage of recycled plastic.

ENI AND CASSA DEPOSITI E PRESTITI

In 2019 Eni and Cassa Depositi e Prestiti signed a cooperation agreement for joint initiatives in the area of the circular economy, of decarbonisation and renewable energies, based on which several ventures were set up: Circular IT, a company developing Waste to Fuel technology and making use of organic fraction of solid municipal waste (OFMSW - see [Eni for - A just transition](#) p. 39); GreenIT, a company for development of renewable energies; and a partnership also including Fincantieri and Terna to study and implement the ISWEC project, to produce renewable energy from the movement of waves (for more information see p. 24).

PROCESSED
IN 2019

304

Thousand tonnes of biomass transformed into:

204

Thousand tonnes of biofuel HVO

38

Thousand tonnes of bio naphtha

14

Thousand tonnes of bio LPG

BIOREFINERIES

To achieve long-term carbon neutrality, Eni's strategic lines in the R&M sector envisage:

- expansion of "bio" refining capacity to over 5 million tonnes per year, from 2023 supplied exclusively with palm oil free 2nd and 3rd generation feedstocks, (in target areas such as the Far and Middle East, Europe for the production of biojet fuel and the United States);
- progressive conversion of traditional Italian refining sites in favour of new plants for production of innovative biofuels and fuels, such as hydrogen, methanol, biomethane and products from recycling of waste materials;
- gradual evolution of the product mix sold in retail outlets, reaching 100% decarbonised products by 2050.

As a first step in this direction, Eni has added biofuel production alongside its traditional business by reconverting its traditional refineries in Venice and Gela to biorefineries, using its Ecofining™ proprietary technology based on a flexible hydrogenation process. The Ecofining™ process makes it possible

to use the main categories of raw materials of biological origin (vegetable oils, used cooking oils, animal fats, food industry co-products, etc.).

After the biorefinery in Venice, put into operation in 2014, the Gela biorefinery was started in August 2019, thus reaching a total feedstock capacity of over 1 million tonnes.

The focus on the sustainability of the biomass used has always been a priority and has led to the definition of a specific policy¹². To ensure the sustainability of its biorefineries and seize the opportunities related to the increase in the share of renewables in transport (as required by the RED II directive in force since 2021), Eni is engaged in several initiatives related to both replacement of the feedstock currently used with others that do not compete with the food chain and that contribute to the exploitation of waste in ways other than their disposal.

In line with its long-term strategy, Eni has also started studies into development of hydrogen production plants (necessary to biofuel production activity) from non-conventional sources and from recovery (e.g. non-recyclable plastics and packaging waste).

The focus on the sustainability of the biomass used has always been a priority and has led to the definition of a specific policy

VENICE BIOREFINERY

Started in 2014 with a capacity of 360 ktonnes/year

In 2018, the new plant for vegetable oils processing went into operation; it can also process unrefined materials with greater flexibility of supply. In addition, a feasibility study is under way for a high-temperature gasification plant for Plasmix (non-recyclable plastics) to produce hydrogen, as an alternative to the traditional technology of natural gas steam reforming, and which will make it possible to increase production to 560 ktonnes/year. Gasification is a technology that does not produce emissions, but only pure CO₂ that can be subsequently captured (CCS) or used in industry.

GELA BIOREFINERY

Conversion completed at the end of 2018 and start of production in 2019, with a capacity of 720 ktonnes/year

The plant has a high flexibility in the supply of raw materials, which will allow the processing of unconventional feedstock (e.g. used vegetable oils and animal fats).



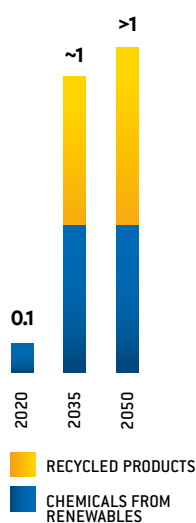
FUR FURTHER INFORMATION: see eni.com



Gela biorefinery. Started in August 2019, with a processing capacity of up to 720,000 tonnes per year, it will be able to progressively treat large quantities of used vegetable oils and frying oils, animal fats, algae and waste by-products to produce high quality biofuels

12) Eni positions on biomass at eni.com

BIO AND RECYCLED PRODUCTS SALES VOLUMES



CHEMISTRY DEVELOPMENT WITH A CIRCULAR APPROACH

In order to contribute to long-term carbon neutrality goals, Versalis (Eni's chemical company) has implemented numerous initiatives and projects, designed to apply the principles of circular economy and develop chemicals from renewable sources. Versalis considers circularity as a strategic driver applied to processes and products throughout their life cycle. The three pillars of the circular economy strategy are based on innovation and include:

- recycling of polymers by developing innovative technologies through internal research and partnerships;
- eco-design to maximise the efficiency of the resources and products at all stages in their life cycle;
- diversification of the feedstock to find the right balance between traditional resources, renewables and secondary raw materials.

Main Versalis circular economy initiatives

• Versalis Revive®: New life for post-consumer plastic

Versalis Revive® is the first range of products with a different polymeric base (styrenics and polyethylene) containing post-consumer plastic, developed at the Versalis research laboratories. Versalis Revive® PE includes polyethylene based compounds containing up to 75% of urban post-consumer plastic. These products, developed with Montello SpA, are for use in particular in the agriculture sector for drip irrigation and in the packaging sector. Versalis Revive® EPS, expandable polystyrene containing raw material from separated domestic waste collected in Italy (e.g. polystyrene cups, trays and yoghurt pots) is produced at the plant in Mantua. The project is being carried out in collaboration with Corepla and the finished product is suitable for the same applications as the virgin product: insulating panels to save energy in buildings, or as protective packaging for appliances and furniture. A collection campaign has been launched in synergy with this project namely "RiVending in Eni" (see case study on p. 26).

• Hoop™, chemical recycling towards an infinitely recyclable plastic

Hoop™ is the name of a Versalis project for development of a new technology to chemically recycle plastic waste. With this aim, Versalis has signed a joint development agreement with the Italian engineering company Servizi di Ricerche e Sviluppo (S.R.S.), owners of a pyrolysis technology that will be further developed to turn mixed plastic waste, which is not mechanically recyclable, into raw material to produce new virgin polymers. A virtuous plastic recycling process that is theoretically infinite, making it possible to produce new virgin polymers suitable for any application and with characteristics identical to those originating from fossil sources. Versalis will create the first plant with a capacity of 6 thousand tonnes/year in Mantua (Italy), with the aim of a subsequent progressive scale-up starting from its production sites in Italy.

Chemical platforms from renewable sources

Through its Biotech business unit, Versalis is continuing its commitment in strengthening its competitive positioning in chemicals from renewable sources, creating synergies between its own research projects and developing integrated technological platforms in line with the development strategy undertaken in recent years:

- The industrial plant in Crescentino (VC) produces bioethanol and, using co-produced lignin, it also generates electricity from renewable sources. Versalis is constructing a platform of chemicals from renewables that integrates the upstream section, based on Proesa® technology for conversion of biomasses into second generation sugars, with research and downstream know-how developed by Versalis. This makes it possible to pursue further developments in the production of a full range of renewable products by fermentation such as bio-oils for biorefining, totally renewable PHA polymers, intermediates for biopolymers and biochemicals.
- In Porto Torres (Sardinia), with the Matrica Joint Venture, Versalis has set up an innovative platform for chemicals from renewable sources to produce bio-intermediates for high value added applications in line with the circular economy model (e.g. coatings and inks, bioplastics, biolubricants and bioherbicides).
- Versalis has signed an agreement with Bridgestone to create synergies and accelerate development of the guayule technological platform, making use of their pilot plant and their farms in Arizona for the production of natural rubber and resins from guayule, a shrub native to the Mexican desert / Arizona, as a sustainable alternative to production from Hevea Brasiliensis.

The industrial plant in Crescentino (VC) produces bioethanol and, using co-produced lignin, it also generates electricity from renewable sources



Other initiatives for sustainability of plastic

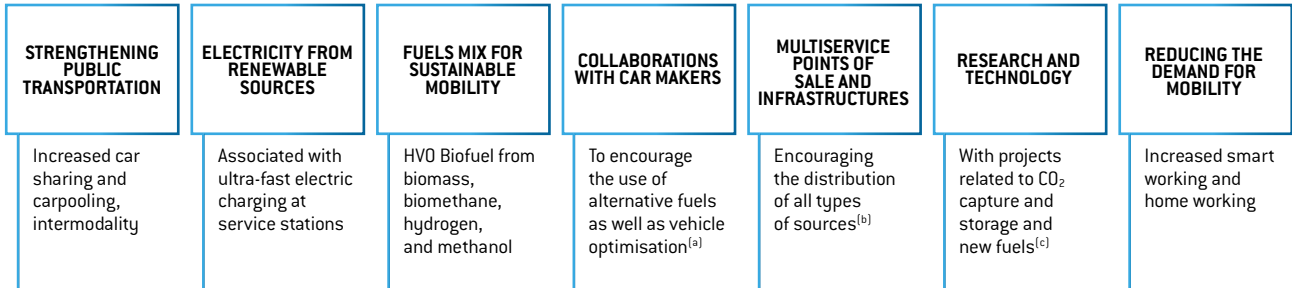
- Versalis is strongly committed to the implementation of “Operation clean sweep”, a voluntary international programme designed to prevent and eliminate the dispersion of plastic granules into the environment throughout the value chain (manufacturers, processors, transporters, recyclers, etc.), a problem identified as one of the sources of marine plastic pollution.
- In 2019, Versalis joined the “Alliance to End Plastic Waste (AEPW)”, a non-profit organisation that aims to invest \$1.5 billion in 5 years to promote projects and create concrete solutions to the problem of plastic waste and in particular marine litter.
- Versalis has joined the Circular Plastics Alliance (CPA) to actively contribute to the ambitious European target of using 10 million tonnes of recycled plastic in new products by 2025. The Alliance, promoted by the European Commission, aims to encourage plastics recycling in Europe while developing a market for secondary raw materials. By joining CPA, Versalis has submitted its voluntary pledges in support of its circular economy strategy that is developed according to three main policies: eco-design, recycling technologies and alternative feedstocks.
 - In the area of eco-design, Versalis has committed to replacing at least half of the packaging for transport of products on pallets and in containers, with packaging containing up to 50% of recycled material.
 - In the recycling and diversification of feedstock areas, Versalis is committed to increasing the production capacity of its new line of polyethylene and polystyrene products, Versalis Revive®, with a content of up to 70% of mechanically recycled plastic.
 - To boost the recovery and recycling of all types of plastics that cannot be mechanically treated, Versalis has pledged to develop a new chemical recycling technology using pyrolysis.

Versalis’ pledges also include assessments conducted by certified life cycle analysis (LCA) to demonstrate the effective sustainability of all the initiatives undertaken, in addition to raising the awareness and increasing active involvement of its employees on the responsible use of plastics in daily activities.

In 2019, Versalis joined the “Alliance to End Plastic Waste” that aims to promote projects and create concrete solutions to the problem of plastic waste and in particular marine litter

SUSTAINABLE MOBILITY

As part of its long-term carbon neutrality policy, Eni plays a key active role in promoting a holistic approach to sustainable mobility, neutral from a technological point of view, that targets a synergistic mix of innovative solutions to guarantee minimisation of the environmental impact and increased efficiency for consumers.



(a) For example, collaboration with FCA.

(b) Fossil fuels, HVO Biofuel, biomethane, CNG - Compressed Natural Gas, LNG - Liquid Natural Gas, LPG - Liquid Petroleum Gas, electric, hydrogen, and infrastructures for distribution of liquid compressed methane and hydrogen and electricity production from renewable sources.

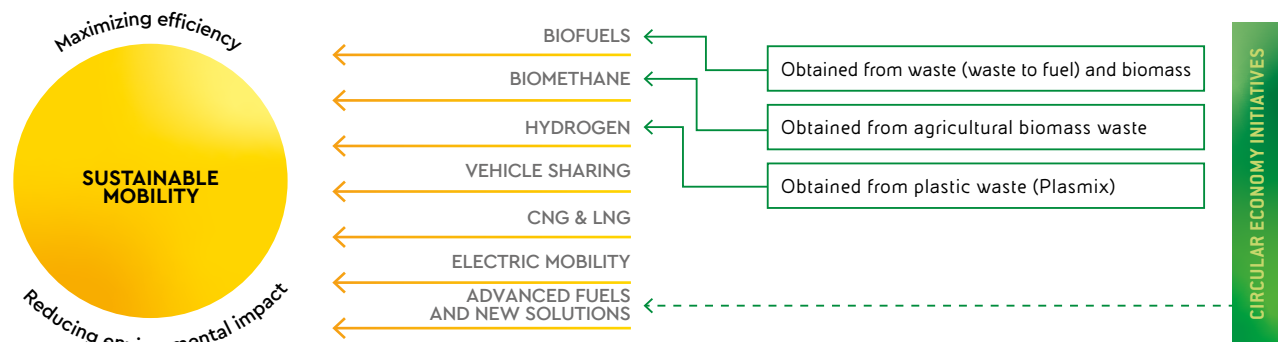
(c) For example, the new fuel for A20 petrol with lower emissions already with the current fleet of vehicles.

From the environmental sustainability viewpoint, Eni does not promote only reuse of production waste, but also the use of marginal land

BIOFUELS

Biofuels, unlike traditional fuels, do not derive from fossil sources, but rather from biomasses of vegetable origin. Since 2014, alongside its traditional business, Eni has been producing biocomponent for diesel by turning vegetable oils into Hydrogenated Vegetable Oil (HVO) which, with the addition of conventional diesel, gives rise to Eni Diesel +, Eni's premium fuel. Additionally, Eni research is active in circular economy projects aiming to exploit biomasses, production waste and urban waste as new feedstocks to produce biofuels HVO in place of oils of vegetable origin.

Used cooking oils (UCO) are a clear example of how the circular economy can help to develop solutions for sustainable mobility starting from production and urban waste. In fact, UCOs, if correctly collected, can be used as an alternative feedstock to the vegetable oils processed in biorefineries for the production of HVO biofuel to be added to conventional diesel to produce Eni Diesel +. Around 50% of UCOs collected in Italy are processed at the Eni biorefinery in Venice and soon at the one in Gela too, also thanks to the partnerships signed by Eni with the CONOE, RenOils and Utilitalia consortia and to the agreements signed with various multi-utility companies engaged in collection and processing of waste. From the environmental sustainability viewpoint, Eni does not promote only reuse of production waste, but also the use of marginal land. Last year, the experimentation which began in Tunisia in 2018 for cultivation of castor beans on pre-desert soils, unusable for food crops, was concluded. This cultivation provides a biomass suitable for the Eni biorefineries and therefore for the production of biocomponents for diesel. Given the positive result of the experimentation, an assessment has begun for the start up of wide-scale cultivation, which would make it possible to set up a more sustainable short supply chain for the Gela biorefinery. To this end, last December a cooperation agreement was signed with the Tunisian company SNDP.



GAS, A TRANSITION VECTOR: CNG - LNG - BIOMETHANE

Methane is the low environmental impact alternative fuel that is technologically more mature and is already available thanks to a distribution network of 1,300 points of sale and a consolidated market in Italy. Eni, with a view to circularity is promoting recovery of biomasses and waste from the agricultural and livestock production chains and aims to create biomethane production plants. Eni intends to promote the entire biomethane supply chain and this is why Eni has reached cooperation agreements with the Consorzio Italiano Biogas, Coldiretti and Confagricoltura and is negotiating with biogas production companies to promote production of biomethane deriving from anaerobic digestion of biomasses, livestock manure and OFMSW. By strengthening its distribution network, Eni will have an important role in facilitating the spread of mobility fuelled by gas including both CNG (Compressed Natural Gas) for cars, and LNG (Liquefied Natural Gas) for heavy transport.

To date, the Eni network has around 200 points of sale (about 100 of which owned by Eni), delivering gaseous methane and 5 points of sale (2 of which owned by Eni) delivering liquid methane. In the next four years, the building of 50 new methane outlets (of which about 40 in partnership with Snam Rete Gas) and 10 new LNG outlets (for development in the heavy transport sector) is envisaged in addition to 2 already in existence.

Eni, with a view to circularity, is promoting recovery of biomasses and waste from the agricultural and livestock production chain and aims to create biomethane production plants



AGREEMENT FOR BIOMETHANE FOR HAULAGE MADE FROM AGRI-FOOD WASTE IN THE MEAT SECTOR

Inalca, Havi Logistics and Eni in 2019 signed the first national agreement for production and use of biomethane for haulage made from agri-food waste in the meat sector. The initiative takes the form of an innovative energy chain for the transition towards a low-impact transport system based entirely on renewable sources.

The project integrates the know-how of the three major industrial operators and is based on energy conversion of the biogas production plants of Inalca (Gruppo Cremonini), the leading Italian operator in the beef sector, from electricity to biomethane. Inalca currently produces 100% of the energy necessary for its needs, 50% of which from renewable sources. Thanks to Eni's technological support for the management of the whole energy conversion process for the plants and the commitment of Havi Logistics for the use of biomethane in the new fleets of vehicles used for meat transport, an integrated energy chain will be created that is able to exploit processing waste for reuse within the context of the system that generated it, achieving a tangible example of circular economy.

HYDROGEN IN TRANSPORT

Hydrogen is an energy vector that offers numerous possibilities in the short-medium term for emissions reductions in the transport sector. Vehicles with fuel cells that combine hydrogen and oxygen to produce electricity guarantee refill times and operating ranges similar to conventional internal combustion vehicles. As part of the activities for sustainable hydrogen mobility, in 2019 Eni signed two partnership agreements with Toyota, which will provide fuel cell vehicles to test hydrogen mobility. The agreements also provide for the construction by Eni of two new service stations, which will deliver hydrogen at 700 bar, one in the area of San Donato Milanese and the other in the area of the Metropolitan City of Venice. Eni has also signed an agreement with the Metropolitan City of Venice for the development of an integrated experimental hydrogen platform. Numerous research projects are in progress including a feasibility study at the refinery in Venice for a high-temperature gasification plant using Plasmix (mix of plastics not currently recyclable) and SSF (Secondary Solid Fuel) to produce hydrogen.

ENI FOR ELECTRIC MOBILITY

Eni has a four-year programme for the installation of electric charging points in about 350 service stations. The plan to develop electric charging points foresees the installation, on roads with high vehicle traffic, of ultra-fast charging stations (350 kW) able to deliver up to 100km of range in 5 minutes thanks to an agreement with Ionity (a JV between some of the major car manufacturers), while in urban centres the plan foresees the installation of fast charging points (50 kW). Moreover, Eni gas e luce (with E-start) offers customisable electric mobility solutions based on customer needs: from wallboxes for the residential segment to charger points for business customers.



CAR SHARING

Enjoy is the Eni vehicle sharing service, that aims to reduce the private vehicle fleet, relieving traffic congestion and improving the quality of life of those who live and work in cities. Enjoy was set up in Milan in December 2013 and now is operative in Milan, Rome, Florence, Turin and Bologna with around 2,500 Fiat 500s (Euro 6) and about 100 Fiat Doblò vans (some of them methane-fuelled). The service is run entirely by app and is based on the “free floating” model with pick up and drop off anywhere within the area covered by the service. Furthermore, the vehicles are dry-cleaned with biodegradable products (thus saving an average of 300 litres of water). At the end of 2019, Enjoy had about 950.000 members (with an average of 400 new members a day).

NEW SOLUTIONS FOR SUSTAINABLE MOBILITY

Eni is investing in new fuels produced from waste as for example the production of methanol from solid urban waste, as non-recyclable plastic waste

In addition to the research projects already mentioned on biofuels and hydrogen, Eni is investing in new fuels produced from waste: in this area a project is currently being assessed at the Livorno Refinery involving production of methanol by high temperature gasification with oxygen of solid urban waste, made up of non-recyclable plastic waste (Plasmix, a mix of plastics not currently recyclable and SSF, Secondary Solid Fuel). The process is based on production of a synthetic gas from carbon-based material. The synthetic gas produced in this way is first purified so that it can subsequently be used to synthesise methanol or to produce pure hydrogen. Methanol produced using waste as a raw material could be considered as a Recycled Carbon Fuel, as provided for by the RED II European directive on renewable energy, and therefore assimilable to a biofuel. It can be used in petrols by transformation into MTBE, or mixed with experimental high alcohol content petrols together with bioethanol (A20 petrol). A new fuel, A20, based on a mix containing 15% methanol and 5% bioethanol has been developed with the FCA Group and subjected to a 13-month test in which five Fiat 500s of the Enjoy fleet travelled about 50,000 km, when rented out for a total of 9,000 times, without encountering any problems. A Waste to Fuel technology has also been developed that is able to convert the organic fraction of solid municipal waste (OFMSW) into bio-oil (see box on p. 39 of [Eni for 2019 - A just transition](#)).

SUSTAINABLE MOBILITY INITIATIVES FOR EMPLOYEES

Eni has developed a plan for sustainable mobility for employees, which includes a series of actions intended to reduce emissions due to travel between home and work, such as:

- promotion of company car pooling;
- the possibility for employees to purchase local public transport passes at advantageous conditions;
- setting up of a company shuttle service with around 350 trips a day connecting Eni's facilities in Rome, Milan, Novara, Ravenna and Vibo Valentia with the nearest public transport hubs.

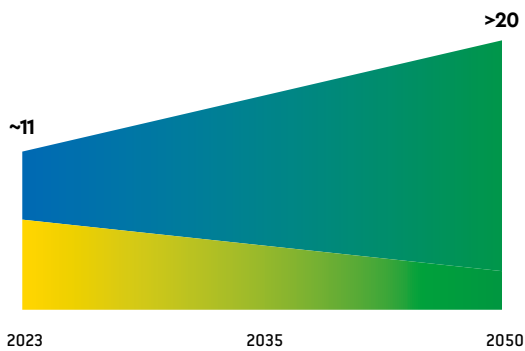
Eni also promotes initiatives able to contribute indirectly to sustainable mobility, such as new forms of work, like Smart Working or teleworking and use of videoconferencing to reduce the need for travel.

RETAIL BUSINESS DEVELOPMENT

The long-term carbon neutrality strategy envisages an important role for retail activities, foreseeing an expansion of retail business activities with the aim of obtaining more than 20 million supply contracts by 2050. This expansion will be achieved in strict relation with the forecasted growth for generation of energy from renewable sources (see the paragraph Industrial scale renewable energy projects) and biomethane and with the target, again by 2050, of distributing only "bio" and renewable products. There are plans for integration of the offer to customers with supply of new generation services and confirmation of the role of Eni's Midstream sector as the operator of plants for electricity generation from gas, integrated with projects for capture and storage of CO₂.

It is foreseen an expansion of retail business activities with the aim of obtaining more than 20 million supply contracts by 2050

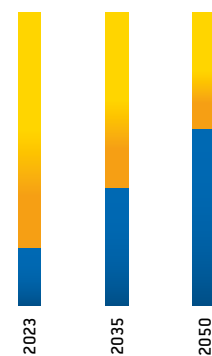
CUSTOMER BASE (mln)



■ CONVENTIONAL POWER → RENEWABLES & BLUE ENERGY
■ FOSSIL GAS → BIOMETHANE

Maximizing volumes from equity sources.

SERVICES CONTRIBUTION (% expected EBITDA)



■ SERVICES
 Distributed Solar PV
 EV charging stations
 Home services
■ COMMODITY

An increasing share of value generated by services.

In line with this strategy, Eni gas e luce is pursuing the objective of evolving from gas and electricity supplier to energy consultant for customers to guide them towards a more conscious utilization of energy, to use less and better. With this in mind, the acquisition of a majority share in SEA SpA, an Energy Service company operating in the energy efficiency services and solutions sector, was completed in 2019 confirming the strategy to reinforce the presence of Eni gas e luce in the value added services market, by increasing the range of services offered. An example in this area is the CappottoMio service: the Eni gas e luce service for energy upgrading of buildings, devised to satisfy the energy needs of blocks of privately-owned apartments, from both the technical and financial points of view, increasing their comfort and reducing wastage. Thermal cladding consists in insulating walls with thermal insulation panels for interiors and exteriors, thus reducing heat dispersion and improving energy efficiency. Moreover, CappottoMio service is not limited to thermal insulation of buildings to reduce dispersion, but comprises energy compliance for central heating systems.

Again in line with the goal of developing a portfolio of value added offers, in 2019 Eni gas e luce launched E-Start, the service devoted to charging solutions for electric vehicles offered to residential and business customers. Additionally, at the end of 2019, Eni gas e luce signed an agreement for the acquisition of 70% of Evolvere SpA, a company operating within sales, installation and maintenance of photovoltaic and electricity storage systems for residential customers (the acquisition was completed in January 2020) thus becoming the leader in Italy in the market for distributed generation from renewable sources.

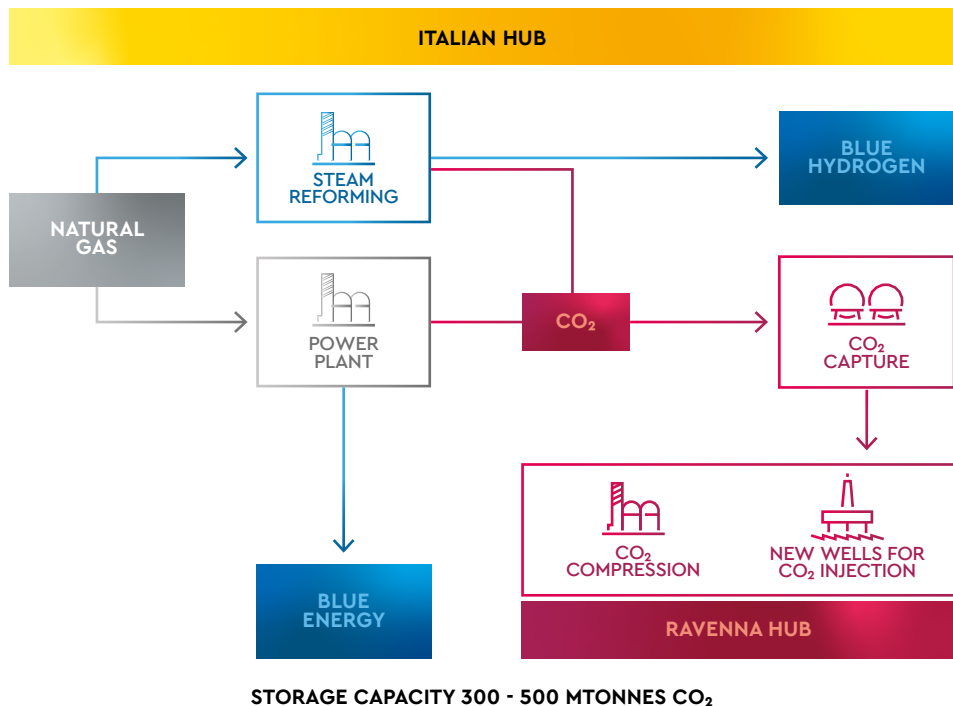
Projects for CO₂ capture both in Italy and abroad, for over 10 million tonnes/year by 2050 are particularly important for Eni's long-term carbon neutrality strategy

CARBON CAPTURE AND STORAGE

Projects for CO₂ capture both in Italy and abroad, for over 10 million tonnes/year by 2050 are increasingly relevant within Eni's long-term carbon neutrality strategy.

The first project under study concerns the Ravenna hub in Italy, where it will be possible to store the CO₂ captured in adjacent industrial sites and plants for generating electricity from gas in the now depleted offshore Adriatic gas fields. Eni expects to conclude the technical studies and the required regulatory checks by 2025 and then go on to the executive stage. Furthermore, thanks to its considerable experience in numerical modelling for reconstruction of the subsoil and fluid dynamics of oil fields, Eni is defining innovative algorithms for controlled management of the phases of CO₂ storage and related monitoring, with the fundamental support of the Eni's Green Data Center.

In terms of projects launched in the area of capture and storage, through OGCI CI, the Oil and Gas Climate Initiative Climate investments (OGCI CI) fund (for further details on OGCI see the section on Partnerships for the carbon neutrality in the long term, p. 38), Eni is working on the "Net Zero Teesside project" (renamed the "Clean Gas Project"). The Net Zero Teesside project is the first commercial project for CO₂ capture developed in England. The project is expected to capture 6 million tonnes/year of CO₂, produced by a gas-fuelled power plant and emissions from local industries, to be stored in a geological formation in the North Sea.



CCS (Carbon Capture and Storage) refers to the set of technologies for capturing carbon dioxide from emissions sources, subsequent transport and safe, permanent storage in deep geological formations. Development of industrial initiatives for capture, utilisation and storage of CO₂ (CCUS) can significantly contribute to the decarbonisation process of the global energy system. At world level, only 19 projects are currently being implemented, with a total storage capacity of around 0.04 billion tonnes/year of CO₂.

Eni envisages, starting from the short to medium term, the possibility of using carbon credits generated by forestry projects to offset part of the residual emissions, most difficult to tackle with current technologies

FORESTRY

Eni recognises the important role of natural climate solutions (NCS) for limiting global warming to well below 2 °C. As part of its long-term carbon neutrality strategy, Eni envisages, starting from the short to medium term, the possibility of using carbon credits generated by forestry projects to offset part of the residual emissions, most difficult to tackle with current technologies. These projects would also bring additional climate and environmental benefits (such as, for example reduction of deforestation, increased forest carbon stocks and conservation and restoration of biodiversity), as well as social and economic development of local populations. These projects (in accordance with the REDD+ scheme) in fact also allows creation of new job opportunities and economic diversification, within the processes of growth of the Countries.

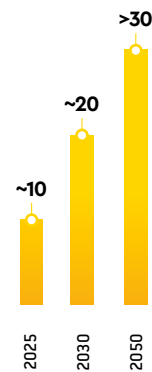
Over recent years, Eni has built up solid partnerships with recognised international developers such as

BioCarbon Partners, Peace Parks Foundation, First Climate and Carbonsink, and this allows supervision of each stage of the design and development of the forestry management projects (known as REDD+), up to ascertainment of the reduction in emissions, with an active role in the governance of the project. Direct participation in the projects proves to be fundamental for guaranteeing compliance with the REDD+ scheme and therefore alignment with the highest standards for certification of carbon emissions reduction and of the social and environmental effects such as the Verified Carbon Standard (VCS) and Climate Community and Biodiversity Standard (CCB), recognised at international level and coherent with the quality standards that Eni intends to achieve.

In this context, in full respect of the local communities, and with their active participation, Eni is working to reduce the causes of deforestation and degradation of biodiversity, proposing alternatives for local development compatible with the territorial context. The main activities proposed are initiatives of economic diversification, such as sustainable agricultural projects, initiatives intended to increase access to energy and to clean cooking, as well as education and professional training programmes.

Eni is considering several initiatives in various Countries and, at present, has begun the first partnerships with governments and international developers in Zambia, Mozambique, Vietnam, Mexico, Ghana, Republic of Congo, Democratic Republic of Congo and Angola. In Zambia, in particular, Eni has become an active member of the governance of the REDD+ Luangwa Community Forests Project (LCFP) and is committed, until 2038, to purchasing carbon credits certified according to VCS and CCB standards, ensuring the success of this long-term REDD+ project.

MTONNES CO₂/Y ABSORBED



Field work in LCFP for biomass estimation

ENI AND THE REDD+ PROJECT IN ZAMBIA

In November 2019, Eni signed an agreement with BioCarbon Partners (BCP), a leading African company operating in long-term forestry conservation, to become an active member of the governance of the Luangwa Community Forests Project (LCFP), the largest REDD+ project in the world for number of beneficiaries as well as the most extensive one in Africa in terms of covered area (994,000 hectares). Cooperation has begun with the government and now involves 12 Chiefdoms and 173,000 beneficiaries. LCFP has also earned the highest assessment from CCBA (The Climate, Community & Biodiversity Alliance), “Triple gold”, for its exceptional impact on communities, climate and biodiversity. With a long-term prospective, Eni has committed to purchase carbon credits certified according to the Verified Carbon Standard and the Climate, Community and Biodiversity Standard for 20 years. Thanks to the sale of carbon credits as part of the REDD+ Luangwa Community Forests Project (LCFP), two classrooms and accommodation for teachers have been renovated in the jurisdiction of Luembe using part of the conservation fees. The infrastructure was officially inaugurated in December 2019 and will facilitate access to education for around 380 families, a total of about 2,300 people. The signing of the agreement by Eni to purchase the carbon credits will lead, for 2020 alone, to an amount deriving from conservation fees of about 38 million Kwacha [equal to \$2.5 million], to be divided between 12 jurisdictions.

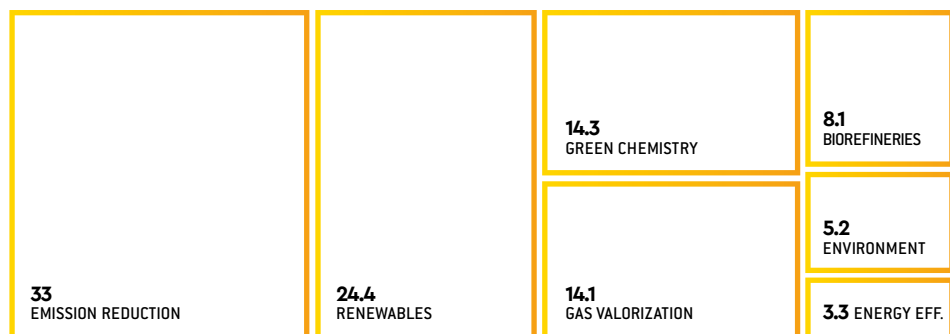
Eni in 2019 signed an agreement with BioCarbon Partners to become an active member of the governance of the Luangwa Community Forests Project, the largest REDD+ project in the world for number of beneficiaries as well as the most extensive one in Africa in terms of covered area

In the 2020–2023 four-year period, 80% of R&D expenditure will be for projects related to carbon neutrality and circular economy

Research and development in the energy transition

Eni is working on a range of technologies focusing on three main drivers: circular economy, carbon neutrality, which includes new advanced systems for conversion of renewable energies like solar and wave power and transformation of CO₂ into useful products, and operating excellence, oriented towards improving existing business areas in terms of efficiency and economic and environmental sustainability. Research and Development at the service of the carbon neutrality strategy is a key element for developing technologically innovative initiatives targeted at reducing greenhouse gas emissions, supporting development of a resilient project portfolio with a low carbon content. In the 2020-2023 four-year period, 80% of R&D expenditure will be for projects related to carbon neutrality and circular economy. For 2019, Eni's economic commitment to scientific research and technological development amounted to €194 million, of which around 102 million were destined to investments for the decarbonisation and circular economy path.

R&D SPENDING IN DECARBONIZATION AND CIRCULAR ECONOMY - 2019 (€ mln)



€102 MLN

Invested in 2019 in R&D activities related to the path to decarbonisation and circular economy

In such path, Eni's proprietary technologies, devised and rapidly developed and implemented in the field, are an important strategic lever, both for increasing efficiency of the traditional business and for development of new businesses.

In the area of production of energy from renewable sources, Eni is developing innovative technologies that can be easily integrated into upstream and downstream activities, in particular the latest generation of solar systems, based both on concentrated solar power (CSP), and on organic photovoltaics (OPV), an innovative technology that, by using semiconducting polymers as the photoactive element in place of the traditional silicon and other inorganic semiconductors, are characterised by lightness, flexibility, easy installation and a high level of recyclability.

Again in the world of renewable energy, a field in which Eni is investing is production of electricity from the movement of waves, with a floating system that turns the motion of sea waves into electricity, to power offshore plants or small communities along the coast. A pilot plant is already in operation in Ravenna, and is connected to the PC80 platform and integrated into a hybrid smart grid system unlike any other in the world made up of photovoltaic cells and an energy storage system.

Finding new ways to capture carbon dioxide and reuse it in industrial processes is strategic for reducing climate-changing gas emissions. An example is biofixation in algae, a process involving capture of carbon dioxide molecules by microscopic algae, cultivated intensively in photobioreactors. In addition to reducing emissions by sequestering the carbon dioxide that makes the algae grow, the system has the advantage of not occupying agricultural land and of producing a high-lipid flour, from which an oil can be extracted and sent to the Eni biorefineries. The process water, lastly, is channelled back into the photobioreactors where the subsequent generation of microalgae will grow. Another research area is Waste to Fuel technology, a hydrothermal liquefaction process perfected by Eni research for processing organic urban waste to obtain bio-oil, characterised by blander conditions than traditional thermal conversion processing like gasification or pyrolysis.

As part of the challenge of pursuing energy production with the lowest possible carbon impact, in 2018 Eni signed new agreements with Commonwealth Fusion Systems LLC (CFS) and MIT with a view to boosting the industrial development of technology for production of fusion power, a safe and sustainable source of energy with no emission of pollutants or long-term waste as is the case of nuclear fission. In January 2020, lastly, Eni and ENEA signed an agreement for a large scientific-technological pole on DTT (Divertor Tokamak Test) fusion, to be set up at the ENEA Research Centre in Frascati (Rome) by the DTT

Collaborations continue with Commonwealth Fusion Systems LLC (CFS) and MIT with a view to boosting the industrial development of technology for production of fusion power

limited co-operative company, in which Eni will hold a 25% share. The DTT project has been set up to provide scientific and technological answers to a number of aspects of the fusion process, such as for example control of extremely high temperatures and the materials to be used, and is offered as support and a test infrastructure for the most advanced technological solutions that will be implemented in major international projects on fusion.

ORGANIC PHOTOVOLTAICS

Organic photovoltaics (OPV) is an innovative technology that, by using semiconducting polymers as the photoactive element in place of the traditional silicon and other inorganic semiconductors, are characterised by lightness, flexibility, easy installation and a high level of recyclability. The technology developed by Eni's R&D will also make it possible to produce modules using printing processes similar to those used in the paper industry, characterised by low energy consumption and a low environmental impact. Eni is the only global player in the OPV sector with a strong technological positioning all along the supply chain, having developed extensive know-how both on material synthesis, with more than 20 patents, and on printing processes thanks to a pilot printed line installed in its laboratories. In 2019, Eni signed a joint development agreement with Armor, a leading company in the OPV printing sector, to speed up the maturing of the technology and develop industrial applications. In addition to the 3 kW installed in 2019, Eni is drawing up a deployment plan that envisages installations in the field of integration of photovoltaics in buildings, of renovation and energy efficiency, of electric self-sufficiency for urban furnishings with a view to smart towns, of off-grid systems for applications in remote areas and access to energy in emerging Countries, a plan that will make Eni one of the key players at global level in development of the technology.

BIOFIXATION IN ALGAE

The process of biofixation in algae developed by Eni makes it possible to capture CO₂ by means of photosynthesis with natural microalgae that receive sunlight or low-energy artificial light. The captured CO₂ can be used in commercial products such as algal flour, food and pharmaceutical supplements, or as a bio-oil usable in biorefineries to produce advanced biofuels. The first experimental plant of this technology powered by direct sunlight, with a rated input capacity of 80 tonnes/year of CO₂ and a corresponding production of 20-40 tonnes/year of algal flour, was inaugurated in Ragusa in 2017. Working with the Politecnico di Torino, conversely, multilayer photobioreactors have been built in which the algae are lit up by a system of LEDs that are left on around the clock and integrated with photovoltaic (PV) sources, OPV solar panels coupled with an energy storage system. These LED lights emit light at the wavelengths preferred by the algae, intensifying their growth process to the maximum with exceptional results: the plant succeeds in producing 500 tonnes of biomass per year per hectare, capturing over 1000 tonnes of CO₂.

MAGNETIC FUSION

Magnetic confinement fusion is the energy technology of the future: carbon-free, it does not produce waste and is intrinsically safe. Eni has invested in a share of the CFS (Commonwealth Fusion Systems) company, an MIT spin-off with the prospect of accelerating the roadmap towards fusion and arriving the first reactor able to input electricity into the grid in 2033 (called ARC). ARC will be a compact-sized Tokamak thanks to the use of High Temperature Superconductors (HTS), an innovative technology in rapid development, with an estimated output target of around 500 MW. Eni's commitment to fusion is also consolidated by a national network for cooperation with the principal technical-scientific bodies (ENEA, CNR and Italian universities) and by joint development of centres of competence in the territory. In particular, in January 2020 Eni's entry into the DTT Consortium with a share of 25% became a concrete reality. This consortium has been charged by ENEA to set up a technical-scientific pole (Divertor Tokamak Test, or DTT) at its research centre in Frascati (Rome), with the aim of studying a fundamental component, the Divertor, to manage the enormous heat flows. Again on magnetic fusion, Eni is also working with CNR, starting up research activities at the "Ettore Majorana" Centre in Gela on the characteristics of plasmas and on development of high temperature superconductors and special materials. The Eni Green Data Center, with its HPC4 and HPC5 supercomputers, will provide the resources suitable to support the researchers and engineering in design, simulation and interpretation of test data. Studies on future socio-economic scenarios for fusion are also part of the Eni development plan and aim to identify integration of innovative technologies into the future energy mix, possible use in remote areas to guarantee access to energy in emerging Countries and the repercussions on industry and employment.

The partnerships in the field of energy transition are essential for eni in order to share knowledge and enhance synergies

Partnerships for carbon neutrality in the long term

Eni is one of the five companies that in 2015 founded the Oil and Gas Climate Initiative (OGCI), a voluntary CEO-led initiative, whose mission is to be the catalyst for actions and investments to mitigate GHG emissions from the Oil & Gas sector and explore new business and new technologies. In 2019, OGCI reported the progress made towards the goal of reducing methane emissions intensity announced in 2018 (collective target for reducing the methane emissions intensity for upstream activities from 0.32%, the figure for 2017, to 0.25% by 2025), with an overall reduction of 9% in 2018 (for more details about methane emissions intensity in Eni see section Metrics and Targets on pp. 46-47). Furthermore, the commitment to joint investment of over \$1 billion in 10 years, for development of technologies able to reduce the GHG emissions of the whole energy chain on global scale continued. In particular, in 2019 the CCUS KickStarter initiative was launched to promote large-scale marketing at world level of CCUS (CO₂ Capture, Utilisation and Storage) technology.

PARTNERSHIP	OBJECTIVE AND MAIN ACTIONS
OIL & GAS CLIMATE INITIATIVE (OGCI)	A Business Partnership between 13 major O&G companies, representing over a third of world hydrocarbon production) with the aim of demonstrating leadership in the fight against climate change, by investing in technologies to reduce GHG emissions by the O&G supply chain. In addition to investing in technologies, OGCI is promoting scientific studies (Methane Science Studies) to close the gap in knowledge of methane emissions along the Oil&Gas supply chain in partnership with the UN Environment Programme. Using the expertise of the Environment Defense Fund and Imperial College, action is being taken on Oil & Gas assets and LCA (Life Cycle Assessment) studies on the entire natural gas supply chain.
CLIMATE AND CLEAN AIR COALITION - OIL & GAS METHANE PARTNERSHIP (CCAC OGMP)	A Public-Private Partnership coordinated by UNEP and the US Environmental Protection Agency (EPA) and focused on reducing methane emissions along the Oil & Gas supply chain through voluntary commitment to the implementation of projects to monitor, reduce and report the main sources of methane. Eni hold the role of co-chair of the Steering Committee (together with the European Commission).
GLOBAL METHANE ALLIANCE	An initiative coordinated by UNEP which, by involving the O&G sector and governments, international organisations and NGOs, aims to promote the adoption of targets for reduction of methane emissions in the O&G sector. The Countries that agree to the initiative undertake to include these targets for reduction in their respective NDCs.
GLOBAL GAS FLARING REDUCTION (GGFR)	A Public-Private Partnership led by the World Bank which aims to reduce the practice of flaring at a global level also through the launch of the zero routines flaring initiative, which commits the adherents to eliminate the volumes of gas sent to process flaring by 2030. For more details about process flaring in Eni, see p. 46.
INTERNATIONAL EMISSIONS TRADING ASSOCIATION	IETA is the main association supporting the implementation of market-based trading schemes for GHG emissions, involving businesses in the pursuit of climate actions in line with the objectives supported by the UNFCCC.
METHANE GUIDING PRINCIPLES	An initiative that currently groups 21 Oil & Gas companies with the aim of reducing methane emissions along the Oil & Gas supply chain, by involving the main supply chain stakeholders.
TCFD (TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES)	A Task Force launched by the Financial Stability Board with the aim of establishing recommendations and guidelines to improve corporate disclosure on financial aspects related to climate change. Eni is also part of the TCFD Oil & Gas Preparers' Forum for development of sector-specific guidelines.
IPIECA	IPIECA is the main association of the Oil & Gas industry active on the most important environmental and social issues.
WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT (WBCSD)	An association of companies active on sustainability issues. The WBCSD coordinates the Oil & Gas focus group for the implementation of the TCFD recommendations.
MIT CSF	A partnership with the Massachusetts Institute of Technology and Commonwealth Fusion Systems for industrial development of technologies for the production of energy by magnetic confinement fusion.
THE CARBON PRICING LEADERSHIP COALITION (CPLC)	A Public-Private Partnership with the long-term goal of setting carbon pricing at global level.
SCIENCE BASED TARGET INITIATIVE (SBTI) - OIL & GAS TRANSITION PROJECT	An initiative promoted within the SBTi with the involvement of various O&G companies and other stakeholders for the development of a shared methodology for the sector that will allow tracing of emissions performances by the companies and the level of alignment compared to the goals of the Paris Agreement.
ITALIAN CIRCULAR ECONOMY STAKEHOLDER PLATFORM (ICESP)	An ENEA platform to bring together initiatives, experiences, criticalities and prospects in the field of the circular economy and to promote the circular economy in Italy through specific actions.

Climate disclosure and positioning

Eni was the only O&G company involved from the very beginning of the activities of the Task Force on Climate Related Financial Disclosure (TCFD) of the Financial Stability Board and has contributed to developing the voluntary recommendations for corporate reporting on climate change issues. Transparency in climate change reporting and the strategy implemented by the company have enabled Eni to be confirmed, once again in 2019, as a leading company with an A- rating in the Climate Change disclosure programme of the CDP (formerly Carbon Disclosure Project, an organisation recognised internationally as one of the reference institutions in performance assessment and for the climate strategy of listed companies). The rating achieved by Eni was equalled by only a handful of other in the Oil & Gas industry and far exceeds the global average which has stabilised at a rating of C, in a rating scale ranging from D (minimum) to A (maximum). As further proof of commitment and quality of transparency, Eni's climate disclosure included in the NFI within the Annual Report 2018 has been commended as good practice with reference to governance, risk management, and metrics and targets in the TCFD Good Practice Handbook by SASB (Sustainability Accounting Standards Board) and CDSB (Climate Disclosure Standards Board).

Eni takes part in a number of trade associations at national and international level. Participation in these organisations allows us to (i) develop, share and promote best practices and standards with our peers in the sector; (ii) contribute to drafting advocacy positions on climate policies and regulations; (iii) identify new approaches to satisfy stakeholders' expectations; and (iv) take part in joint actions in the industry to mitigate the risks related to climate change and in support of the energy transition. As an energy company, Eni has a clear and coherent position on all issues related to climate, that is a clear positioning of the company on issues of climate policy and sound internal guidelines for a responsible commitment within the associations to which we belong. In this context and with the aim of satisfying the expectations of all our stakeholders, including investors, in the early months of 2020, Eni decided to publish its guidelines on responsible engagement on climate change within the industry associations. These guidelines clearly set the principle issues that Eni considers to be essential for defending the climate, in line with its own strategy.

Eni published its guidelines on responsible engagement on climate change within the industry associations

FOR FURTHER INFORMATION: for further details see the full document "[Eni's responsible engagement on climate change in business associations](#)" published on [eni.com](#)



2019 OGCI event with the CEOs of the Companies participating at the initiative

PRINCIPAL THEMES OF ENI GUIDELINES ON RESPONSIBLE ENGAGEMENT WITH INDUSTRY ASSOCIATIONS

Support for the goals of the Paris Agreement

Eni supports the goals of the Paris Agreement to limit temperature increases to well below 2 °C. Eni recognises the Intergovernmental Panel on Climate Change (IPCC) as the most important scientific body on climate change.

The role of natural gas

The most challenging scenarios provide for an important role for natural gas in fulfilment of commitments towards the goals established in the Paris Agreement. Therefore, European and international policies should continue to recognise the opportunities that natural gas can offer in replacing high carbon intensity fuels and improving air quality. Towards 2050, innovative gas technologies such as adding hydrogen to natural gas, gas energy and CCUS (carbon capture, utilisation and storage) will further contribute to the effective decarbonisation of European and international energy systems. As an integrated energy supplier, Eni aims to increase its natural gas production significantly to favour the transition to a progressively decarbonised portfolio.

Carbon pricing

Eni signed the “The Energy Transition and Care for our Common Home” declaration on carbon pricing in the Vatican on June 14, 2019. In line with that declaration, Eni agrees that:

- Governments should establish reliable and economically significant carbon pricing regulations based on taxes, trade mechanisms or other market-based measures. The levels at which they are set should encourage good trade practices, consumer behaviour, research and investments to significantly promote the energy transition while minimising the costs for the most vulnerable categories, thus sustaining economic growth and human prosperity.
- The combination of pricing policies and mechanisms for carbon emissions should be designed in such a way as to offer simultaneously innovation and investments in solutions with low carbon emissions, at the same time helping those who are less able to pay. This involves the need to confront with social, economic and transnational impacts within the overall policy design.
- Achieving changes in government policies for effective carbon pricing requires transparency, support and constant commitment of the energy sector, the investment community, political leaders, energy consumers and civil society.

Regulatory frameworks to increase energy efficiency and implement low carbon emissions technologies

Eni welcomes policies, actions and tools that favour innovation in low carbon emissions technologies and clean processes in energy-intensive industries. Eni promotes switching from a linear model to a circular model and considers governments as key partners for the development of these enabling technologies. The type of support that we can offer will depend on the level of technological and commercial maturity of each identifiable solution. Eni considers that any admissible innovation should be selected only after application of strict criteria of technological neutrality and other considerations such as the potential for abatement of greenhouse gases (GHG) and the sustainability of the whole value chain.

Natural Climate Solutions

Eni recognises the important role of Natural Climate Solutions (NCS) in limiting global warming well below 2 °C and the additional benefits that these measures could bring for protection of biodiversity and ecosystems, and in fostering sustainable economic growth. However, in order to unblock carbon finance, it is essential to encourage commitment of the private sector in NCS projects. For Eni, the carbon credits generated by the activities of NCS, where properly addressed to guarantee a high level of environmental integrity, could offer opportunities to offset emissions that are difficult to reduce with the technologies currently available. In line with this vision, in order to reduce emissions due to deforestation and forest degradation, Eni is working with national and international institutions to ensure compliance with the national REDD+ framework and with the principal local communities to foster sustainable economic growth, providing them with alternatives to the factors that drive deforestation.

Climate Transparency and Disclosure

Eni has long been committed to promoting full and effective dissemination on climate changes related issues and, in this regard, confirms its commitment in implementing the TCFD recommendations. Publication of information on progress towards decarbonisation is structured around the four thematic areas covered by the TCFD recommendations: *governance, strategy, risk management and metrics and targets*.



An example of Natural Carbon Solution for Eni: Luangwa Community Forests Project

In 2019, Eni conducted an initial analysis on 28 trade associations, selecting the associations and think tanks that are active in the political debate on climate and energy issues and are more significant for our stakeholders based on their impact and reputation. For each association, Eni assessed, by analysing the data available to the public (reports, websites and public announcements), their alignment on each of the six subjects to the related Eni positions. Where the positions of the trade associations proved to be not very clear or ambiguous, Eni classified them as “partially aligned” or “not aligned” and for each one the information was then verified with Eni representatives in the association and their management. Following the final assessment, each association was assigned one of the following three categories: aligned, partially aligned, not aligned.

Of the 28 trade associations assessed, 25 are aligned with Eni position on climate policies, two (Methanol Institute and National Biodiesel Board) are partially aligned and one (American Fuel and Petrochemical Manufacturers) is not aligned.

Within the trade associations that were assessed as partially aligned, Eni will work proactively with the leaders of the association and with the other members to guide and influence the positions of each organisation towards a more positive lobbying vision. In particular, in every debate on climate and energy issues, Eni will try to steer and guide the discussions in compliance with the principles and positions indicated. With regard to the association that proved not to be aligned with the Company's positions, Eni has decided not to renew its membership in 2020.

Eni will conduct an annual assessment of coherence between the various positions of the trade associations and Eni's vision. Should the results of the assessment be that the position of an organisation in which Eni takes part is in contradiction with any aspect of its climate strategy, Eni will distance itself from such position and from any associated campaigns. As demonstrated by the results of the first assessment, if these points of view contradict one of the fundamental principles of our climate strategy, Eni will take the possibility of withdrawing from the association into consideration.

ALIGNED

The positions declared by the association are in line with the goals of the Paris Agreement and are not at variance with Eni positions with reference to other themes.

PARTIALLY ALIGNED

The association does not explicitly support the goals of the Paris Agreement, but it supports at least one of the other themes of Eni's positioning.

NOT ALIGNED

The association does not explicitly support the goals of the Paris Agreement, or the public positions of the association are not in line for at least one of the other themes of Eni's positioning.



Cardinal Peter Kodwo Appiah Turkson

Born in Nsuta-Wassaw (Ghana) in 1948. Ordained a priest in 1975 for the archdiocese of Cape Coast. He completed his specialization studies in Sacred Scripture at the Pontifical Biblical Institute in Rome. Appointed Archbishop in 1992 and elevated to the dignity of cardinal in 2003. President of the Pontifical Council for Justice and Peace since 2009, in 2016 – following the reform of the Curia – Pope Francis appointed him Prefect of the new Dicastery for Promoting Integral Human Development. Since 2018 he has been a member of the Board of FEEM – Fondazione Eni Enrico Mattei.

Energy Transition Dialogues

In 2018 and 2019 the Dicastery for Promoting Integral Human Development of the Holy See, led by Cardinal Peter K.A. Turkson, and the Notre Dame University were promoters of two moments of dialogue on energy transition involving the CEOs of the leading energy companies and investment funds.

The 50th anniversary of World Earth Day established by the United Nations is in 2020. It is the fifth anniversary of Pope Francis' Encyclical Laudato Si' and of the famous Sustainable Development Goals (SDGs). In the face of the global crisis, the shortcomings of a development model almost entirely oriented towards "economic growth" and "gross domestic product indices" are more evident. Is there an alternative?

Economic growth is often focused on personal enrichment, but the etymology of the word hides much more. The term economy, in fact, comes from the Greek oikos, house, and nomos, norm, which literally means management of the house and its resources to meet the needs of all its inhabitants. The challenge, then, is to return to the origin of the word. We must reconfigure the economy by putting human dignity, of every person, back at the centre, without leaving anyone behind. This is the sense of a commitment to the common good, and this is why we speak of an economy of communion, inspired by the Church of the origins, or of a circular economy, a fundamental lever to give a value to everything possible without waste. Finally, here is the value of the economy as an opportunity for "impact investing", particularly if we consider the Covid-19 post-emergency recovery phase. As Pope Francis often says, money, politics and the economy must serve, not rule, man. This is the path and the Sustainable Development Goals (SDGs) represent a guideline, which all national/international political and economic activities should follow, allowing every inhabitant of the planet to live with dignity and freedom.

Your Eminence, in 2018 and 2019 the Dicastery for Promoting Integral Human Development and Notre Dame University were the promoters of the Vatican Dialogues on "The Energy Transition and Care for Our Common Home", which saw the participation of the CEOs of the leading energy companies and investment funds. On this occasion, there was talk of "just transition". What do you think makes the transition "just" in the world of business? What are the factors and main elements that must be at the heart of this transition?

A business is an organized economic activity at the heart of which there is the production of goods and services that requires the capital of shareholders, strength of workers, respect for the communities, the environment and the land where the business is hosted. Talking about "just transition" – an expression mentioned in the "Preamble to the Paris Agreement" – means talking about a change that has the right consequences for all these actors; it means managing the social and employment impact of the transition to a low-carbon society. If well managed, this transition can generate new jobs, reduce inequalities and improve the quality of life of people affected by climate change. In the world of energy, it means searching for alternative forms of energy, reducing CO₂ emissions and at the same time meeting the energy needs of humanity, because without energy there is no development. I hope that your efforts in this direction will be profitable and environmentally friendly, thus contributing to the global and sustainable development of humanity.

Both experiences of the Vatican Dialogues represented a positive and constructive moment of encounter from which important reflections and ideas arose. This is the case of the long-term vision, distribution of resources and integral development of peoples, carbon pricing and transparency, and circular economy. What is the contribution made by companies in this dialogue?

The willingness of the executives of these companies to participate in the debate, sharing thoughts and points of view, is already an important contribution. I don't think there was such a place for discussion before. The meeting allowed us to better understand the complex implications and details of this sector. The dialogue on "carbon pricing" has been important. It is fundamental to work in this direction as well as in environmental protection. Saint Augustine said that the desire for something is already a big part of

its acquisition. Accepting the need for change – as we see from your activities and research – makes us look with hope to the future and the conservation of the earth as a common home.

You are the contact person for the Holy See of the Covid-19 emergency task force. What contribution can the private sector make to this emergency and more generally to the “struggle” for development?

The health emergency presents us with a challenge that, in terms of its size and depth, appears global. Its resolution can only move from a broad approach, shared by all the players involved in the public and private scope. The experience of the SDGs, in this context, can provide a concrete precedent, illuminating the path to be followed. The Goals were adopted by the United Nations in September 2015, but the foundations for success were laid earlier at the United Nations Conference in Addis Ababa (July 2015). It was there, in fact, that for the first time people began to look at the private sector as a key partner in achieving them. In this respect, civil society organisations, the public sector and the private sector must be able to ally themselves (SDG 17) to give life to this “narrative of human dignity” – as former UN Secretary General Ban Ki-moon said when presenting the SDGs – without leaving anyone behind. We must learn to share more knowledge and experience, going beyond the economic side. Just think of partnerships in the medical field, where patent sharing is fundamental to counter health emergencies, such as the current pandemic.

What opportunity does this moment of crisis represent for you?

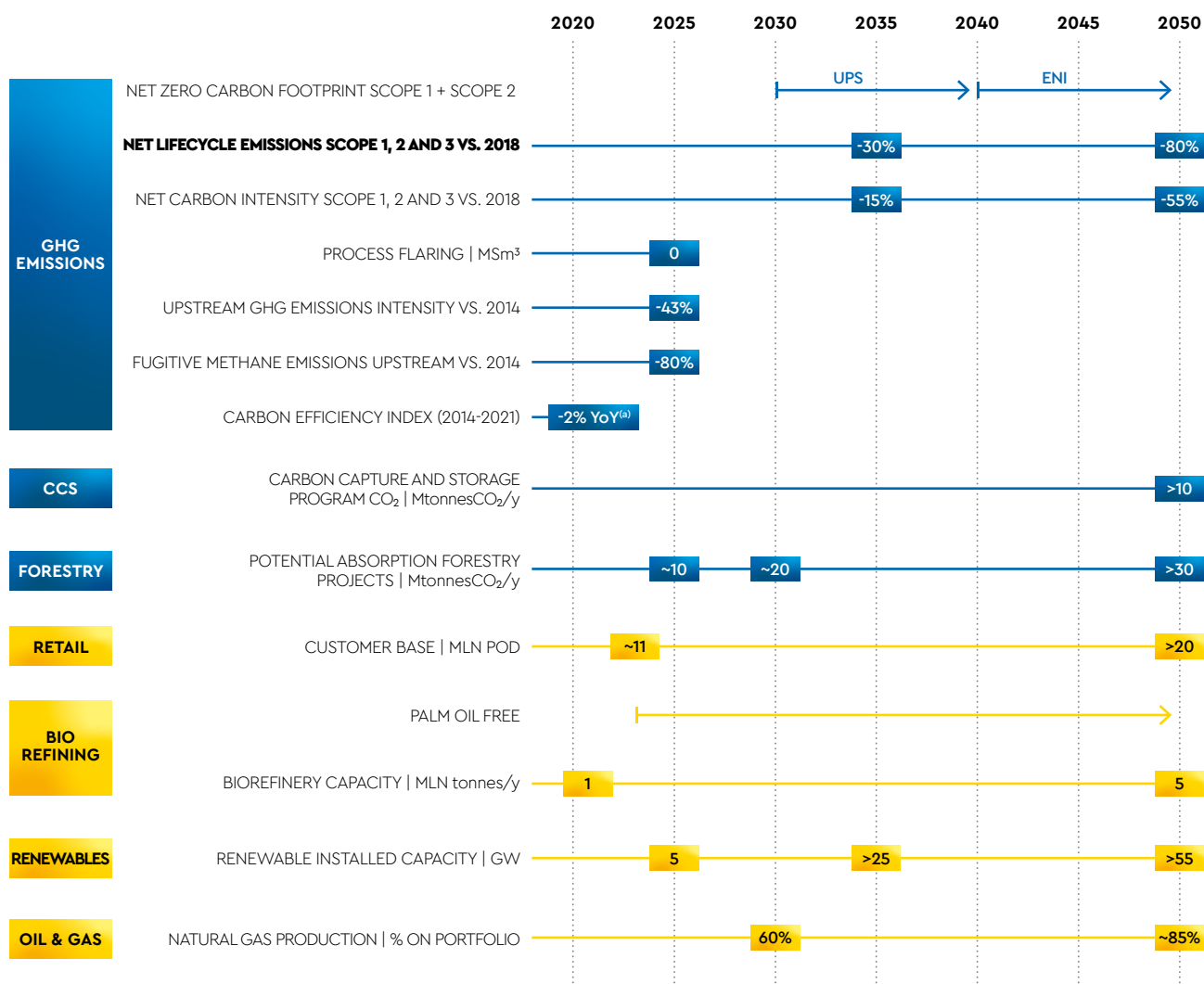
Despite technological progress and the expansion of scientific knowledge, we must admit that there is still an element of uncertainty in life. No-one can predict the future 100%. We are at a crossroads and we must decide which direction to take. This choice brings a crisis with it, but also hides an opportunity. We have the opportunity to reflect on the economic model we want for the future, putting global and supportive action back at the centre of the discussion, in order to face the emergency. Globalisation has shortened distances, bringing us closer to each other, but has not yet managed to make us brothers. Afraid, not self-sufficient, vulnerable in the face of the pandemic, we rediscovered fraternity, solidarity and sharing present in the DNA of the human being. The virus has caused great pain but has made us rediscover as a single family. It is time to have a new look at the world, putting into circulation – as also Pope Francis underlines – the “antibodies of solidarity”.



Vatican Dialogues on Energy Transition, June 2019

Metrics & targets

Targets and commitments



(a) Year on Year (average reduction of 2% yearly).

Eni's commitments to reach these targets foresee a total spending in the 2020-2023 four-year time interval of approximately €4.9 billion for decarbonisation, circular economy and renewable energies, including the R&D activities on these matters and the forestry program. The details of the main items are as follows:

€ billion

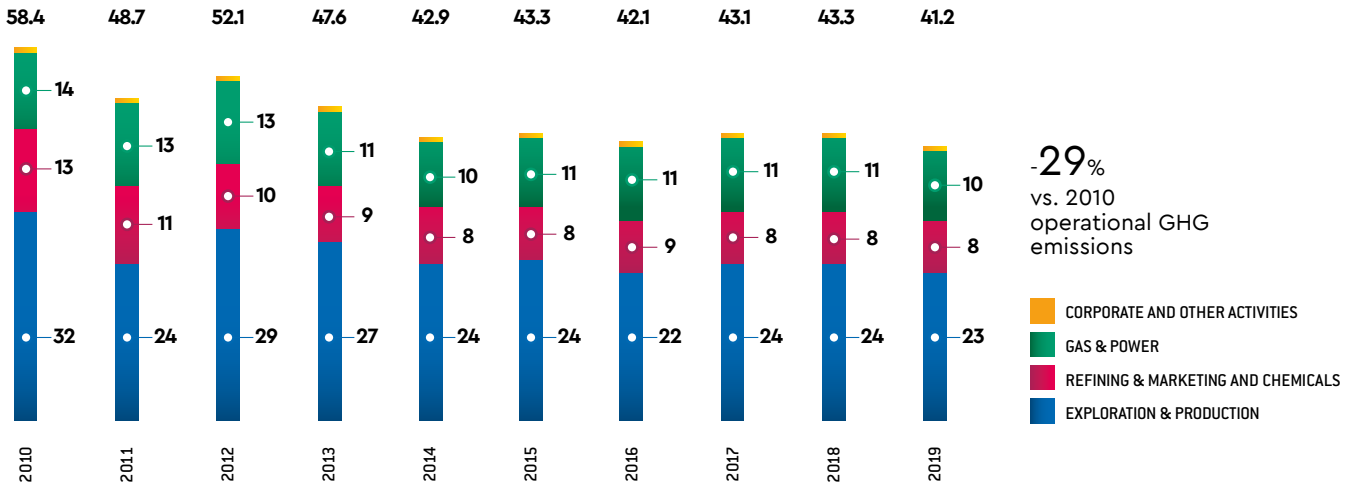
2020-2023

Investments in power generation plants from renewable sources	2.6
Investments to reduce GHG emissions	0.6
Investments in circular economy	0.6
R&D expenditure in decarbonization projects and circular economy	0.8
Forestry expenditures and other initiatives	0.3

OPERATIONAL GHG EMISSIONS

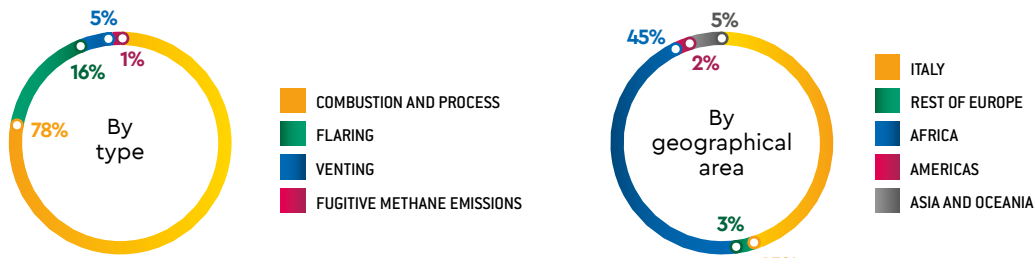
Scope 1 and Scope 2 GHG emissions are defined with the operated criteria (activities carried out by Eni globally accounted on a 100% basis), in all the reference businesses. Since 2019 these emissions are subject to a “reasonable assurance” verification from the auditing firm.

OPERATIONAL GHG EMISSIONS (MtonnesCO₂eq)



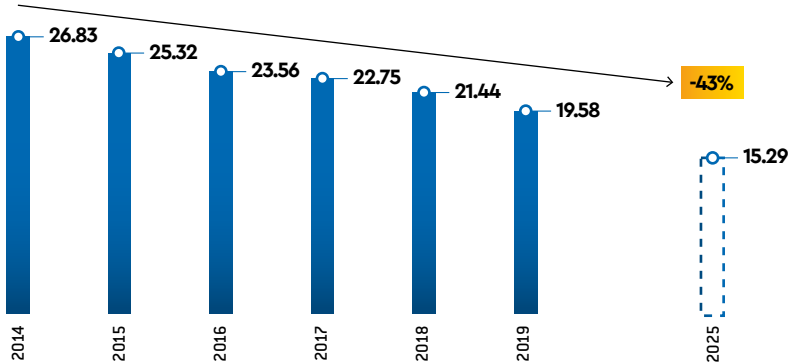
- Overall, direct GHG emissions show, in 2019, a reduction of 5% against 2018 and 29% against 2010
- Such reduction is mainly due to the drop in emissions from combustion and process as a result of energy efficiency projects, and to reduced fugitive and venting methane emissions
- About 50% is already subject to carbon pricing schemes, mainly the European Emission Trading Scheme which covers all the major mid-downstream plants
- 55% comes from the Exploration & Production business

DIRECT GHG EMISSIONS BY TYPE AND GEOGRAPHICAL AREA



- The largest emission contribution is from combustion and process, linked to the energy consumption of the production assets
- GHG emissions are mainly linked to activities in Italy and Africa. The remaining amounts are located in Asia, Oceania, Rest of Europe and America

UPSTREAM GHG INTENSITY INDEX (tonnesCO₂eq/kboe)



-27%
vs. 2014
upstream GHG intensity index

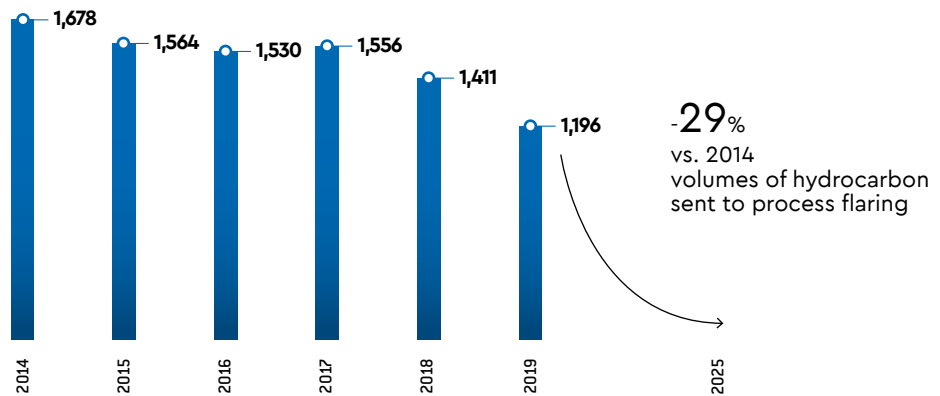
The upstream GHG intensity index, expressed as the ratio between direct emissions in tonnes of CO₂eq and gross production in thousands of barrels of oil equivalent, in 2019 improved by 9% over 2018, with a value of 19.58 tonnesCO₂eq/kboe. The overall reduction against 2014 is 27% in line with the 2025 target. This index improvement is linked to the increase in production at new low emissions intensity plants.

The objective of reducing upstream GHG intensity will contribute to the target of improving the carbon efficiency index by 2% a year by 2021 compared to 2014. It will be pursued by all Eni business units and will include Scope 2 emissions (see the section Energy Efficiency).

ZERO PROCESS FLARING

One of the drivers to reduce the emission intensity of the upstream business is the progressive reduction and the elimination of the process flaring. In this context, Eni has committed itself to the goal of eliminating the volumes of gas sent to process flaring by 2025. Despite the considerable reduction in the practice of flaring that has taken place in the last decade (-58% vs. 2010), in 2019 flaring has represented about 30% of the emissions related to the production of hydrocarbons in the upstream business. Eni is active in specific programs to reduce process flaring through gas valorization for the production of electricity for local populations, distribution for domestic consumption or export. Where these practices are not possible, Eni has created associated gas reinjection systems in the reservoirs.

VOLUMES OF HYDROCARBON SENT TO PROCESS FLARING (MSm³)



Eni confirms its commitment to zeroing of hydrocarbon sent to process flaring by 2025, 5 years earlier than the timescale laid down by the Global Gas Flaring Reduction (GGFR) initiative promoted by the World Bank, of which Eni is a partner.

In 2019, the volumes of hydrocarbons sent to process flaring, equal to 1.2 billion Sm³, decreased by 15% against 2018 and by 29% against 2014, in relation to the contribution of specific flaring down projects (Libya, Nigeria, Turkmenistan) and the decrease of production that involved a number of fields with associated gas flaring. In 2019, Eni invested €31 million in flaring down projects, in particular in Libya and in Nigeria.

METHANE EMISSIONS

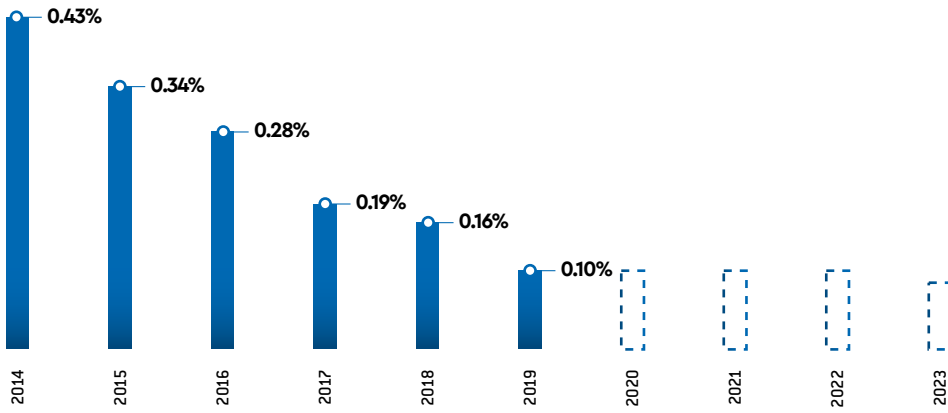
Eni continues its commitment to optimising its monitoring and reporting processes to reduce methane emissions from operated assets. Methane emissions are essentially concentrated in the upstream value chain (64 ktonnes CH₄, equal to 97% of the Eni total) and are due to fugitive emissions, unburnt methane from flaring and process venting.

The upstream methane emissions intensity (0,10% in 2019) decreased by 37% vs. 2018.

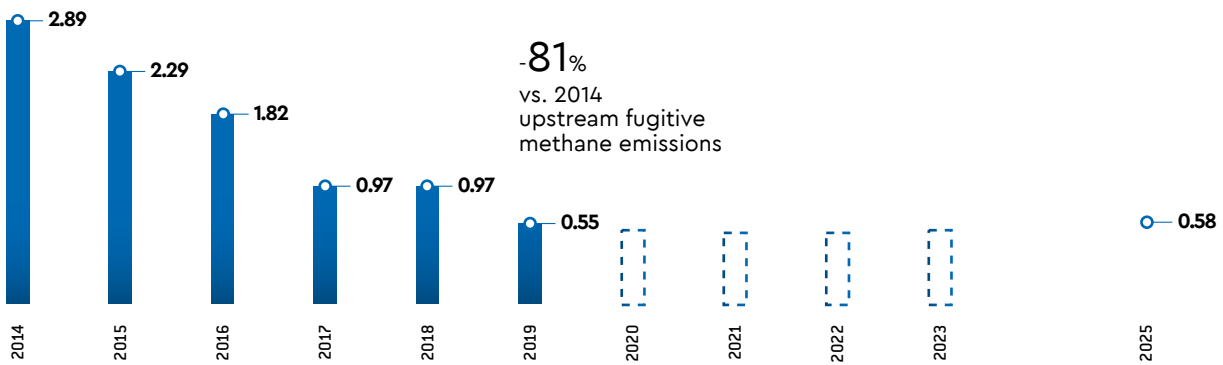
Eni contributes to the OGCI collective target of reducing the upstream methane intensity from 0.32% in 2017 to 0.25% in 2025, with an ambition of 0.20%.

The Centrale Electricque du Congo, started in 2010 in Congo, is an integral part of the Eni's wider strategy to increase access to energy in the Country and promote the valorization of local energy sources

METHANE INTENSITY UPSTREAM
 (m³CH₄/m³ gas sold)



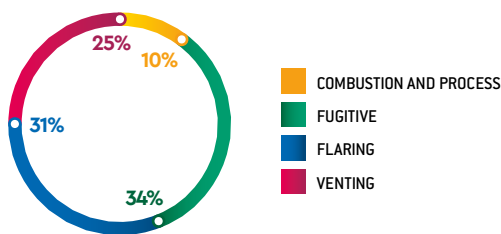
FUGITIVE METHANE EMISSION (UPSTREAM)
 (MtonnesCO₂eq)



In absolute terms, in 2019 Eni achieved a reduction of over 2.34 MtonnesCO₂eq of upstream fugitive methane emissions vs. 2014, reaching the target of 80% reduction by 20 years in 2025, 6 years in advance (in 2019 reduction was equal to 81% vs. 2014).

In 2019, upstream fugitive methane emissions were 0,55 MtonnesCO₂eq, decreasing by 44% against 2018, due to Leak Detection and Repair (LDAR) campaigns which consist in on-site monitoring of plant components to identify and eliminate methane leaks by scheduling appropriate maintenance. It is possible to control almost entirely fugitive emissions enabling savings and improving safety in operations. To date, 89% of Eni upstream assets (calculated on the basis of production levels) are already covered by LDAR programmes.

CH₄ EMISSION SOURCES - TOTAL ENI 2019

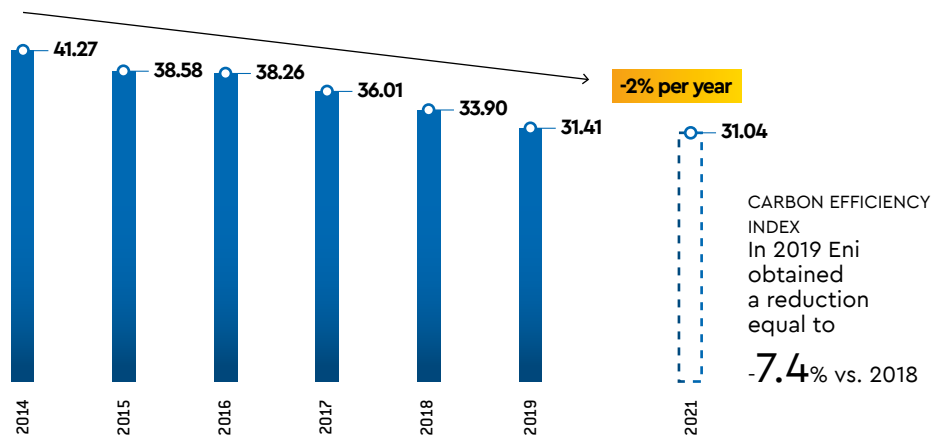


Eni is partner of several initiatives which envisage the implementation of voluntary actions for the reduction of methane emissions along the entire Oil & Gas production process and which promote the implementation of regulations and objectives on the reduction of methane emissions along the supply chain of the natural gas; for more information see section on Partnerships for carbon neutrality in the long term on p. 38].

COMMITMENT TO ENERGY EFFICIENCY

Since 2018 Eni monitors the emission intensity of its industrial activities through a specific index, which expresses the intensity of GHG Scope 1 and Scope 2 emissions per unit of energy production, thus measuring their degree of efficiency in a decarbonisation context. A progressive improvement target of 2% per year was imposed on this index compared to the 2014 index value. This target refers to the overall Eni index, maintaining the appropriate flexibility in the trends of the individual businesses.

CARBON EFFICIENCY INDEX (tonnes CO₂eq/kboe)



In 2019, the index was 31.41 tonnes CO₂eq/kboe, with a 7.4% decrease against 2018 (33.90 tonnes of CO₂eq/kboe) due to the contribution of the upstream sector and an improvement in refining activities. Although the target for reduction set for 2021 has already been achieved, Eni will continue to strive towards progressive 2% improvement over the coming years.

In 2019, Eni has proceeded with the investment plan both in projects aiming directly at increasing energy efficiency of assets (over €8 million) and in development and revamping projects with significant impacts on the energy performance of businesses. The actions taken during the year, when fully operational, will allow fuel savings of 303 ktoe/year (mainly in the upstream sector), to which 25 GWh/year of savings on purchases of electricity and steam must be added. The benefit in terms of lower emissions will be around 0.8 million tonnes of CO₂eq. The commitment to improving energy performance is also demonstrated by the inclusion of the tool of ISO 50001 certification schemes in Eni's HSE regulatory system.

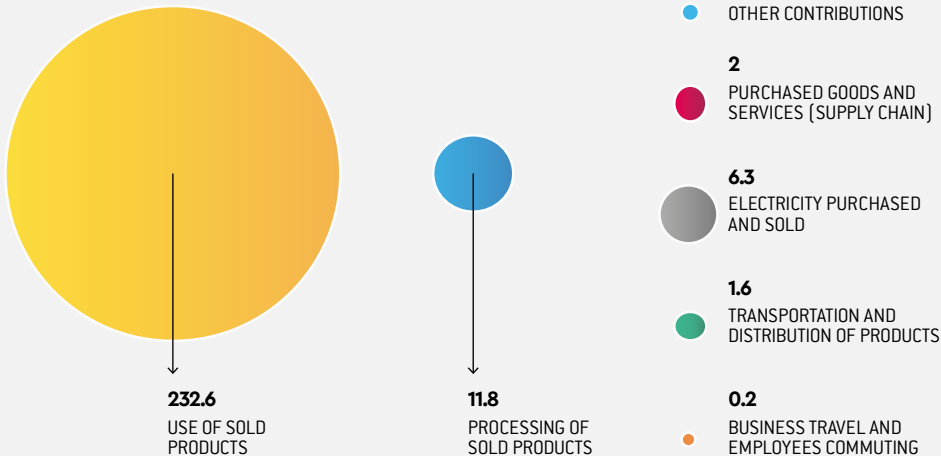
Moreover, the commitment continues in aligning the most energy-intensive sites to certification the energy management system, as well as the transition to the new standard 50001:2018. The greatest commitment will be made in the upstream sector with energy assessment programs aimed at identifying opportunities for improvement and at the deployment of management systems, which in other businesses are already operational in the relevant industrial sites.



INDIRECT EMISSIONS

In line with the main reporting standards, Eni reports also the indirect emissions associated with its activities along the entire value chain, applying consolidated methodologies (GHG Protocol, IPIECA). Indirect emissions emissions from purchases of electricity, steam and heat from third parties (so-called Scope 2), they are quantitatively negligible in Eni (about 0.7 million tonnes CO₂eq), since in most cases electricity generation takes place through its own installations and the related associated GHG emissions are recorded among direct emissions. Nonetheless, Eni has included Scope 2 emissions within the scope of the target of improving carbon efficiency by 2% a year by 2021 (see section Energy Efficiency). As regards all the other emissions in the value chain (so-called Scope 3), Eni reports them using internationally recognised methods (IPIECA), which foresee an analysis by category of activity.

Eni reports the indirect emissions associated with its activities along the entire value chain, applying consolidated methodologies (GHG Protocol, IPIECA)



Metrics

Below the metrics considered to evaluate risks and opportunities linked with climate change.

		2017	2018	2019
Direct GHG emissions (Scope 1) ^(a)	(million tonnes CO ₂ eq)	43.15	43.35	41.20
- of which: CO ₂ equivalent from combustion and process		33.03	33.89	32.27
- of which: CO ₂ equivalent from flaring		6.83	6.26	6.49
- of which: CO ₂ equivalent from methane fugitive emissions		1.14	1.08	0.56
- of which: CO ₂ equivalent from venting		2.15	2.12	1.88
Indirect GHG Emissions (Scope 2) ^(a)		0.65	0.67	0.69
Indirect GHG emissions (Scope 3) from use of sold products ^(b)		228.62	231.12	232.6
Carbon efficiency index	(tonnes CO ₂ eq/kboe)	36.01	33.90	31.41
GHG emissions/100% operated hydrocarbon gross production (upstream)		22.75	21.44	19.58
GHG emissions/Refinery throughputs (raw and semi-finished materials)	(tonnes CO ₂ eq/ ktonnes)	258	253	248
GHG emissions/Equivalent electricity produced (EniPower)	(gCO ₂ eq/kWheq)	395	402	394
Upstream methane emissions	(ktonnes CH ₄)	105.2	97.8	63.6
- of which fugitive		38.8	38.8	21.9
Methane intensity upstream (m ³ CH ₄ /m ³ marketed gas)	%	0.19	0.16	0.10
Volumes of hydrocarbon sent to flaring	(million Sm ³)	2,291	1,945	1,913
- of which: sent to process flaring		1,556	1,411	1,196
Equity hydrocarbon production ^(c)	(kboe/day)	1,816	1,851	1,871
100% operated hydrocarbon gross production	(million boe)	998	1,067	1,114
Renewable installed capacity	(GW)	0.01	0.04	0.17
Capacity of biorefinery	(ktonnes/year)	360	360	660 ^(c)
- of which: Venice	(ktonnes/year)	360	360	360
- of which: Gela	(ktonnes/year)			300 ^(c)
R&D expenditures	(€ mln)	185	197.2	194
- of which: related to decarbonization		72	74	102

(a) Direct emissions (Scope 1) and Scope indirect emissions are 100% on operatorship basis.

(b) Indirect emissions Scope 3 are estimated on the basis of Eni equity.

(c) Includes the pro-rata of installed capacity of Gela's biorefinery (720,000 tonnes/y) started in August 2019.

Other metrics

Net lifecycle Emissions (2018)	MtonnesCO ₂ eq	537
Net Carbon Intensity (2018)	gCO ₂ eq/MJ	72
Hydrocarbon resources (3P+Contingent) at 12/31/2019: % gas on total	(%)	>50%
Total break-even price of new upstream projects in progress Brent@\$25/bl		Brent@23 \$/bl
Internal rate of return (IRR) of new upstream projects in progress 22% @Eni scenario		25% @ Eni Scenario
Incidence of Eni's uncommitted investments	(%)	2022-2023 equal to 60%
Carbon pricing - Eni scenario	(\$/tonnes)	40 in 2015 corrected by inflation
Stress test: resilience of the upstream portfolio (100% cash generating unit) based on the IEA SDS low-carbon scenario		Impact on fair value of assets: 2%≤X≤7%
Sensitivity 2019: Brent (+1 \$/bl)	(€ bln)	Adjusted operating profit: 0.26 Adjusted net profit: 0.16 Free cash flow: 0.17

Correspondance table: TCFD recommendations Eni reporting

		CONSOLIDATED NON-FINANCIAL INFORMATION	ENI FOR ADDENDUM – CARBON NEUTRALITY IN THE LONG-TERM
GOVERNANCE			
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<ul style="list-style-type: none"> a) Oversight by the BoD b) Role of the management 	 KEY ELEMENTS	<ul style="list-style-type: none"> a) Ch. Role of the Board of Directors, p. 6 b) Ch. Role of management, p. 9
STRATEGY			
<p>Disclose the current and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<ul style="list-style-type: none"> a) Climate-related risks and opportunities b) Incidence of climate-related risks and opportunities c) Resilience of the strategy 	 KEY ELEMENTS	<ul style="list-style-type: none"> a) Ch. Risk management, pp. 12-13 b) Ch. Risk management, pp. 12-13 and Ch. Strategy, pp. 14-41 c) Ch. Strategy, pp. 14-41 <p>For a summary of the financial commitments, see table on p. 44</p>
RISK MANAGEMENT			
<p>Disclose how the organization identifies, assesses, and manages risks related to climate change.</p>	<ul style="list-style-type: none"> a) Identification and assessment processes b) Management processes c) Integration into overall risk management 	 KEY ELEMENTS	<ul style="list-style-type: none"> a) Ch. Integrated climate risk management model, pp. 10-11 b) Ch. Integrated climate risk management model, pp. 10-11 c) Ch. Integrated climate risk management model, pp. 10-11
METRICS & TARGETS			
<p>Disclose the metrics and targets used to assess and manage risks and opportunities related to climate change where such information is material.</p>	<ul style="list-style-type: none"> a) Metrics used b) GHG emissions c) Targets 	 KEY ELEMENTS	<ul style="list-style-type: none"> a) Ch. Metrics, p. 50 b) Ch. Metrics, p. 50 c) Ch. Targets and commitments, p. 44

Eni's non-financial reporting

Through its non-financial reporting, Eni wants to proactively recount its role in the energy transition, sharing its values, corporate strategies, objectives and results achieved to date. For this reason, also aware of the increasing centrality of non-financial information, over the years Eni has developed an articulated reporting system with the aim of satisfying the information needs of its stakeholders in a complete and timely manner in terms of both variety and of level of deepening.

ENI FOR 2019 – A JUST TRANSITION

Report that describes how through the integrated business model Eni creates long-term value, through the operational excellence model, alliance for the promotion of local development and carbon neutrality in the long term.



ENI FOR 2019 CARBON NEUTRALITY IN THE LONG TERM

In-depth analysis of Governance, risk management activities, strategy and main Eni metrics and targets on climate change, in line with the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD) of the Financial Stability Board.

ENI FOR 2019 SUSTAINABILITY PERFORMANCE

This report, available only online provides an overview of non-financial performance indicators along the three pillars of Eni's business model.

PRINCIPLES AND REPORTING CRITERIA *Eni for 2019 is prepared in accordance with the "Sustainability Reporting Standards" of the Global Reporting Initiative (GRI Standards) with an "in accordance Core" level of adherence and taking into account the 10 principles of the global Compact. For more information, see the paragraph "Reporting criteria" of "Eni for 2019 - Sustainability performance", p. 31.*

EXTERNAL ASSURANCE *Eni for 2019 was also subjected to limited assurance this year by an external auditing firm (see Eni for 2019 - A just transition, pp. 73-75). Furthermore, for the first time the GHG Scope 1 and Scope 2 emissions are also subjected to a reasonable assurance by the same external auditing firm (PwC), with the aim of guaranteeing an even greater solidity of these data having strategic relevance for Eni (see "Eni GHG Emissions Statement - 2019").*

This document Eni For - Carbon neutrality in the long term is an integral part of Eni's annual disclosure on climate change, in response to the recommendations of the Task Force on Climate-related Financial Disclosures. To ensure completeness and the appropriate level of information for all interested stakeholders, Eni's communication on these issues is carried out together with the following documents:

2019 CONSOLIDATED DISCLOSURE OF NON-FINANCIAL INFORMATION

Document prepared in accordance with the requirements of Legislative Decree 254/2016 and published in the 2019 Annual Report, providing integrated disclosure on the management model, the policies applied and the main risks related to the environment, social issues, personnel, respect for human rights and the fight against corruption.

RESPONSE TO THE CDP CLIMATE CHANGE DISCLOSURE PROGRAM

A further level of detail of the disclosure is given by the responses to the CDP Climate Change questionnaire. In 2019 Eni confirmed itself as a leading company with an A- rating in the CDP Climate Change disclosure program.

FEEDBACK

Your feedback is important to us. If you have comments, suggestions or questions, you can email the sustainability team at sostenibilita@eni.com



In addition to these documents, Eni publishes annual Local Sustainability Reports and Sustainability reports of subsidiaries in order to provide local stakeholders with more detailed information about non-financial commitments and performances, regarding specific geographical areas and business line. These reports, together with more information on sustainability at Eni, are available online at eni.com.



Eni SpA

Registered Office

Piazzale Enrico Mattei, 1 - Rome - Italy
Share capital: € 4,005,358,876.00 fully paid-up
Business Register of Rome,
Taxpayer's code 00484960588

Other Branches

Via Emilia, 1
San Donato Milanese (MI) - Italy

Piazza Ezio Vanoni, 1
San Donato Milanese (MI) - Italy

Page layout and supervision

K-Change - Rome - Italy

Print

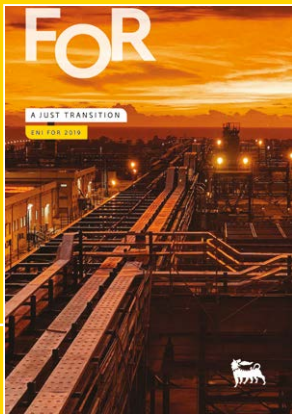
Varigrafica Alto Lazio - Viterbo - Italy



Printed on XPer Fedrigoni paper



Eni could pay royalties to persons entitled in the case of sources for which the authors have not been traced.



ENI FOR 2019 - SUSTAINABILITY REPORT

