

# Glossary

The glossary of Oil and Gas terms is available on Eni's web page at the address eni.com. Below is a selection of the most frequently used terms.

**2nd and 3rd generation feedstock** Are feedstocks not in competition with the food supply chain as the first generation feedstock (vegetable oils). Second generation are mostly agricultural non-food and agro/urban waste (such as animal fats, used cooking oils and agricultural waste) and the third generation feedstocks are non-agricultural high innovation feedstocks (deriving from algae or waste).

**Average reserve life index** Ratio between the amount of reserves at the end of the year and total production for the year.

**Barrel/bbl** Volume unit corresponding to 159 liters. A barrel of oil corresponds to about 0.137 metric tonnes.

**Boe (Barrel of Oil Equivalent)** Is used as a standard unit measure for oil and natural gas. Effective January 1, 2019, Eni has updated the conversion rate of gas produced to 5,310 cubic feet of gas equals 1 barrel of oil.

**Compounding** Activity specialized in production of semi-finished products in granular form resulting from the combination of two or more chemical products.

**Conversion** Refinery process allowing the transformation of heavy fractions into lighter fractions. Conversion processes are cracking, visbreaking, coking, the gasification of refinery residues, etc. The ration of overall treatment capacity of these plants and that of primary crude fractioning plants is the conversion rate of a refinery. Flexible refineries have higher rates and higher profitability.

**Elastomers (or Rubber)** Polymers, either natural or synthetic, which, unlike plastic, when stress is applied, return, to a certain degree, to their original shape, once the stress ceases to be applied. The main synthetic elastomers are polybutadiene (BR), styrene-butadiene rubber (SBR), ethylenepropylene rubber (EPR), thermoplastic rubber (TPR) and nitrilic rubber (NBR).

**Emissions of NO<sub>x</sub> (Nitrogen Oxides)** Total direct emissions of nitrogen oxides deriving from combustion processes in air. They include NO<sub>x</sub> emissions from flaring activities, sulphur recovery processes, FCC regeneration, etc. They include NO and NO<sub>2</sub> emissions and exclude N<sub>2</sub>O emissions.

**Emissions of SO<sub>x</sub> (Sulphur Oxides)** Total direct emissions of

sulfur oxides including SO<sub>2</sub> and SO<sub>3</sub> emissions. Main sources are combustion plants, diesel engines (including maritime engines), gas flaring (if the gas contains H<sub>2</sub>S), sulphur recovery processes, FCC regeneration, etc.

**Enhanced recovery** Techniques used to increase or stretch over time the production of wells.

**Eni carbon efficiency index** Ratio between GHG emissions (Scope 1 and Scope 2 in tonnes CO<sub>2</sub>eq.) of the main industrial activities operated by Eni divided by the productions (converted by homogeneity into barrels of oil equivalent using Eni's average conversion factors) of the single businesses of reference.

**Green House Gases (GHG)** Gases in the atmosphere, transparent to solar radiation, that trap infrared radiation emitted by the earth's surface. The greenhouse gases relevant within Eni's activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). GHG emissions are commonly reported in CO<sub>2</sub> equivalent (CO<sub>2</sub>eq.) according to Global Warming Potential values in line with IPCC AR4, 4<sup>th</sup> Assessment Report.

**Infilling wells** Infilling wells are wells drilled in a producing area in order to improve the recovery of hydrocarbons from the field and to maintain and/or increase production levels.

**LNG** Liquefied Natural Gas obtained through the cooling of natural gas to minus 160°C at normal pressure. The gas is liquefied to allow transportation from the place of extraction to the sites at which it is transformed and consumed. One ton of LNG corresponds to 1,400 cubic meters of gas.

**LPG** Liquefied Petroleum Gas, a mix of light petroleum fractions, gaseous at normal pressure and easily liquefied at room temperature through limited compression.

**Mineral Potential (potentially recoverable hydrocarbon volumes)** Estimated recoverable volumes which cannot be defined as reserves due to a number of reasons, such as the temporary lack of viable markets, a possible commercial recovery dependent on the development of new technologies, or for their location in accumulations yet to be developed or where evaluation of known accumulations is still at an early stage.

**Moulding** Activity of moulding of expanded polyolefins for production of ultra-light products.

**Natural gas liquids** Liquid or liquefied hydrocarbons recovered

from natural gas through separation equipment or natural gas treatment plants. Propane, normal-butane and isobutane, isopentane and pentane plus, that used to be defined natural gasoline, are natural gas liquids.

**Net Carbon Footprint** Overall Scope 1 and Scope 2 GHG emissions associated with Eni's operations, accounted for on an equity basis, net of carbon sinks mainly from Natural Climate Solutions.

**Net Carbon Intensity** Ratio between the Net GHG lifecycle emissions and the energy products sold, accounted for on an equity basis.

**Net GHG Lifecycle Emissions** GHG Scope 1+2+3 emissions associated with the value chain of the energy products sold by Eni, including both those deriving from own productions and those purchased from third parties, accounted for on an equity basis, net of offset mainly from Natural Climate Solutions.

**Oil spills** Discharge of oil or oil products from refining or oil waste occurring in the normal course of operations (when accidental) or deriving from actions intended to hinder operations of business units or from sabotage by organized groups (when due to sabotage or terrorism).

**Oilfield chemicals** Innovative solutions for supply of chemicals and related ancillary services for Oil & Gas business.

**Olefins (or Alkenes)** Hydrocarbons that are particularly active chemically, used for this reason as raw materials in the synthesis of intermediate products and of polymers.

**Over/underlifting** Agreements stipulated between partners regulate the right of each to its share in the production of a set period of time. Amounts different from the agreed ones determine temporary over/underlifting situations.

**Plasmix** The collective name for the different plastics that currently have no use in the market of recycling and can be used as a feedstock in the new circular economy businesses of Eni.

**Production Sharing Agreement (PSA)** Contract in use in African, Middle Eastern, Far Eastern and Latin American Countries, among others, regulating relationships between states and oil companies with regard to the exploration and production of hydrocarbons. The mineral right is awarded to the national oil company jointly with the foreign oil company that has an exclusive right to perform exploration, development and production activities and can enter into agreements with other local or international entities. In this type of contract, the national oil company assigns to the international contractor the task of performing exploration and production with the

contractor's equipment and financial resources. Exploration risks are borne by the contractor and production is divided into two portions: "cost oil" is used to recover costs borne by the contractor and "profit oil" is divided between the contractor and the national company according to variable schemes and represents the profit deriving from exploration and production. Further terms and conditions of these contracts may vary from Country to Country.

**Proved reserves** Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

**Renewable Installed Capacity** Is measured as the maximum generating capacity of Eni's share of power plants that use renewable energy sources (wind, solar and wave, and any other non-fossil fuel source of generation deriving from natural resources, excluding, from the avoidance of doubt, nuclear energy) to produce electricity. The capacity is considered "installed" once the power plants are in operation or the mechanical completion phase has been reached. The mechanical completion represents the final construction stage excluding the grid connection.

**Reserves** Quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project. Reserves can be: (i) developed reserves quantities of oil and gas anticipated to be through installed extraction equipment and infrastructure operational at the time of the reserves estimate; (ii) undeveloped reserves: oil and gas expected to be recovered from new wells, facilities and operating methods.

**Scope 1 GHG Emissions** Direct greenhouse gas emissions from company's operations, produced from sources that are owned or controlled by the company.

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

**Scope 3 GHG Emissions** Indirect GHG emissions associated with the value chain of Eni's products.

**Ship-or-pay** Clause included in natural gas transportation contracts according to which the customer for which the transportation is carried out is bound to pay for the transportation of the gas also in case the gas is not transported.

**Take-or-pay** Clause included in natural gas purchase contracts according to which the purchaser is bound to pay the contractual price or a fraction of such price for a minimum quantity of the gas set in the contract also in case it is not collected by the customer. The customer has the option of collecting the gas paid and not delivered at a price equal to the residual fraction of the price set in the contract in subsequent contract years.

**UN SDGs** The Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future for all by 2030. Adopted by all United Nations Member States in 2015, they address the global challenges the world is facing, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

For further detail see the website <https://unsdg.un.org>

**Upstream/downstream** The term upstream refers to all hydrocarbon exploration and production activities.

The term mid-downstream includes all activities inherent to oil industry subsequent to exploration and production. Process crude oil and oil-based feedstock for the production of fuels, lubricants and chemicals, as well as the supply, trading and transportation of energy commodities. It also includes the marketing business of refined and chemical products.

**Upstream GHG Emission Intensity** Ratio between 100% Scope 1 GHG emissions from upstream operated assets and 100% gross operated production (expressed in barrel of oil equivalent).

**Wholesale sales** Domestic sales of refined products to wholesalers/distributors (mainly gasoil), public administrations and end consumers, such as industrial plants, power stations (fuel oil), airlines (jet fuel), transport companies, big buildings and households. They do not include distribution through the service station network, marine bunkering, sales to oil and petrochemical companies, importers and international organizations.

**Work-over** Intervention on a well for performing significant maintenance and substitution of basic equipment for the collection and transport to the surface of liquids contained in a field.

## Abbreviations

<b>/d</b>	per day	<b>km</b>	kilometers
<b>/y</b>	per year	<b>ktoe</b>	thousand tonnes of oil equivalent
<b>bbbl</b>	billion barrels	<b>ktonnes</b>	thousand tonnes
<b>bbl</b>	barrels	<b>mmbbl</b>	million barrels
<b>bboe</b>	billion barrels of oil equivalent	<b>mmboe</b>	million barrels of oil equivalent
<b>bcf</b>	billion cubic feet	<b>mmcf</b>	million cubic feet
<b>bcm</b>	billion cubic meters	<b>mmcm</b>	million cubic meters
<b>bln liters</b>	billion liters	<b>mmttonnes</b>	million tonnes
<b>bln tonnes</b>	billion tonnes	<b>MTPA</b>	Million Tonnes Per Annum
<b>boe</b>	barrels of oil equivalent	<b>No.</b>	number
<b>cm</b>	cubic meter	<b>NGL</b>	Natural Gas Liquids
<b>GWh</b>	Gigawatt hour	<b>PCA</b>	Production Concession Agreement
<b>LNG</b>	Liquefied Natural Gas	<b>ppm</b>	parts per million
<b>LPG</b>	Liquefied Petroleum Gas	<b>PSA</b>	Production Sharing Agreement
<b>kbbbl</b>	thousand barrels	<b>Tep</b>	Ton of equivalent petroleum
<b>kboe</b>	thousand barrels of oil equivalent	<b>TWh</b>	Terawatt hour