

GLOSSARY

Anhydrous Ethanol: Fuel ethanol intended for mixing with gasoline A in the formulation of gasoline C. ANP Resolution No. 907/2022.

Apparent Consumption: the summation of parcels referring to production and imports, minus the exported volume.

Bbl/d: barrels per day.

Bidding Round: the Bidding Rounds are auctions through which the Federal Union grants the right to explore and produce oil and natural gas in Brazil.

Biodiesel: fuel composed of alkyl esters of long-chain carboxylic acids, produced from the transesterification and/or esterification of fatty materials, fats of vegetable or animal origin, according to the specification of ANP Resolution No. 920/2023.

Biomethane: gaseous biofuel consisting essentially of methane, derived from the purification of biogas, according to the specification of ANP Resolutions No. 866/2022 and 906/2022.

Boe: “barrel of oil equivalent”. A measurement unit for equivalent energy, per convention equal to 1,390 Mcal.

Calorie: this book adopts the calorie at 15 °C (cal_{15}). 1 cal_{15} is the amount of thermal energy required to heat 1g of air-free water from 14.5 °C to 15.5 °C under a constant pressure of 101.325 kPa (kiloPascals). Conversion factor: 1 cal_{15} = 4.1855 J.

Concession: an administrative contract through which ANP grants to companies that meet the technical, economic and legal requirements the right to explore and produce oil and natural gas in the Brazilian territory.

Concessionaire: assignee or signatory company of contracts signed with the Union, through the ANP, for the purpose of exploration, development and production of oil and natural gas. ANP Resolution No. 867/2022.

Decarbonization Credit (CBIO): instrument registered in written form, for the purpose of proving the individual target of the fuel distributor as referred to in art. 7 of Law No. 13,576/2017. ANP Resolution No. 758/2018.

Dew Point Plant (DPP): plant that uses Joule-Thomson effect to adjust dew point of processed gas.

Energy Oil Products: oil products mainly utilized as fuels, which release energy and/or light when burned. That denomination covers the following oil products: LPG, gasoline A, aviation gasoline, lamp fuel, jet fuel, diesel oil, fuel oil and coke.

Ethanol: liquid biofuel derived from renewable biomass, whose main component is ethyl alcohol, which can be used, directly or through modifications, in internal combustion engines with spark ignition, in other forms of energy generation or in the petrochemical industry, and can be obtained through different technological routes, as specified in regulation. Law No. 12,490/2011.

Gasoline A: fuel produced from processes used in refineries, petrochemical plants and formulators, intended for automotive vehicles equipped with spark ignition engines, free of oxygenated components. ANP Resolution No. 950/2023.

Gasoline C: fuel obtained from a mixture of A gasoline and anhydrous ethanol fuel, in the proportions defined by the applicable law. ANP Resolution No. 950/2023.

Hydrated Ethanol: Fuel ethanol intended for direct use in internal combustion engines. ANP Resolution No. 907/2022.

Liquefied Natural Gas (LNG): natural gas in liquid state obtained by cryogenics process it has undergone and stored in near atmospheric pressure. ANP Resolution No. 948/2023.

Liquid Fractionation Plant (LFP): plant designed to separate NGLs components (ethane, propane, butane, iso-butane and C_5^+), consisting of boiling off hydrocarbons one by one.

Liquid Recovery Plant (LRP): plant designed to process natural gas in order to recover NGLs. That process is required to meet pipeline dewpoint specifications.

Methanol: chemical compound whose chemical formula is CH_3OH . It is liquid and inflammable, besides possessing an invisible flame and freezing point of around - 98 °C. Methanol has large-scale utilization in plastics industry and in reactions of pharmacological importance. Concerning the biofuels industry, methanol is used in the transesterification of vegetal oils and animal grasses, in order to produce biodiesel.

Natural Gas Condensate Processing Plant (NGCPP): plant that separates natural gas condensate from a raw natural gas.

Natural Gas Liquids (NGL): hydrocarbons in natural gas removed from gas as liquids, in lease separators, field facilities, NGPPs or in pipeline transfers, according to ANP Resolution No. 971/2024.

Natural Gas Processing Plant (NGPP): plant designed to separate heavy components (propane and butane) from natural gas.

Natural Gas Refrigeration Plant (NGRP): plant that separates natural gas from natural gas liquids.

Natural Gas Unit (UGN): plant that separate condensate from natural gas and stabilize it.

Non-Energy Oil Products: oil products that, although having significant energy content, are used for non-energy aims. That denomination covers the following oil products: greases, lubricants, paraffin, asphalts, solvents, coke, naphtha, aromatic extract, vacuum gas oil, light cycle oil, atmospheric residue, diluents, n-paraffin, other petroleum oils, bituminous minerals, as well as other oil products of lesser importance.

Operator company: enterprise that is legally designated by the consortium for conducting and executing all the operations and activities in the concession area, according to the provisions established in the concession contract signed by ANP and the concessionaire.

Petroleum Law: Law No. 9,478/1997.

Refining capacity: processing capacity for which an industrial plant was designed, measured in bbl/d or m³/d.

Refining Capacity per Operation Day: maximum load volume that the primary distillation plant(s) can process in a 24-hour period, when operating at full capacity, under optimal and stable conditions in terms of raw materials, products and downstream plants, without any maintenance interruptions scheduled in any of the components of the refinery's production system. It is expressed in operation m³/d or bbl/stream day.

Refining Capacity per Calendar Day: maximum load volume, expressed in a 24-hour period, that the primary distillation plant(s) can process, under average and normal operating conditions, during the complete cycle of plant maintenance activities. This capacity takes into account any reduction in capacity of all the refinery's plants in continuous operation resulting from limitations that may delay,

interrupt or reduce production. It is expressed in m³/calendar day or bbl/calendar day.

RenovaBio: is a Policy, instituted by Law No. 13.576/2017, with the objective of promoting the adequate expansion of the production and use of biofuels in the Brazilian energy matrix, with an emphasis on the continuity of fuel supply; increase the energy efficiency of the biofuel production sector; and, contribute to the reduction of greenhouse gas (GHG) emissions.

Round Zero: denominates the act of signing, under the provisions of the Petroleum Law, article 34, of August 6, 1998, of licensing contracts between ANP and Petrobras for 397 blocks that were already under exploration, development or production by the state-owned company at the time the Petroleum Law was enforced.

Toe: “ton of oil equivalent”. A measuring unit for equivalent energy, per convention, equal to 10,000 Mcal.

Shale: generally clay sedimentary rock, organic material (kerogen). When submitted to high temperatures, shale releases oil, water and gas, as well as a carbon solid residual.