

Annual Report and  
Form 20 - F  
2020

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**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

**FORM 20-F**

**ANNUAL REPORT**  
**PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

for the fiscal year ended December 31, 2020  
Commission File Number 001-15106

**Petróleo Brasileiro S.A. — Petrobras**  
(Exact name of registrant as specified in its charter)

Brazilian Petroleum Corporation — Petrobras  
(Translation of registrant's name into English)

The Federative Republic of Brazil  
(Jurisdiction of incorporation or organization)

Avenida República do Chile, 65 - 20031-912 - Rio de Janeiro – RJ - Brazil  
(Address of principal executive offices)

Andrea Marques de Almeida  
Chief Financial Officer and Chief Investor Relations Officer  
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Avenida República do Chile, 65 - 20031-912 - Rio de Janeiro – RJ - Brazil  
(Name, telephone, e-mail and/or facsimile number and address of company contact person)  
Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class:	Trading Symbol(s):	Name of each exchange on which registered:
Petrobras Common Shares, without par value*	PBR/PBRA	New York Stock Exchange*
Petrobras American Depositary Shares, or ADSs (evidenced by American Depositary Receipts, or ADRs), each representing two Common Shares	PBR/PBRA	New York Stock Exchange
Petrobras Preferred Shares, without par value*	PBR/PBRA	New York Stock Exchange*
Petrobras American Depositary Shares (as evidenced by American Depositary Receipts), each representing two Preferred Shares		New York Stock Exchange
4.375% Global Notes due 2023, issued by PGF	PBR	New York Stock Exchange
6.250% Global Notes due 2024, issued by PGF	PBR	New York Stock Exchange
5.299% Global Notes due 2025, issued by PGF	PBR	New York Stock Exchange
8.750% Global Notes due 2026, issued by PGF	PBR	New York Stock Exchange
7.375% Global Notes due 2027, issued by PGF	PBR	New York Stock Exchange
5.999% Global Notes due 2028, issued by PGF	PBR	New York Stock Exchange
5.750% Global Notes due 2029, issued by PGF	PBR	New York Stock Exchange
5.093% Global Notes due 2030, issued by PGF	PBR	New York Stock Exchange
5.600% Global Notes due 2031, issued by PGF	PBR	New York Stock Exchange
6.875% Global Notes due 2040, issued by PGF (successor to PifCo)	PBR	New York Stock Exchange
6.750% Global Notes due 2041, issued by PGF (successor to Pifco)	PBR	New York Stock Exchange
5.625% Global Notes due 2043, issued by PGF	PBR	New York Stock Exchange
7.250% Global Notes due 2044, issued by PGF	PBR	New York Stock Exchange
6.900% Global Notes due 2049, issued by PGF	PBR	New York Stock Exchange
6.750% Global Notes due 2050, issued by PGF	PBR	New York Stock Exchange
6.850% Global Notes due 2115, issued by PGF	PBR	New York Stock Exchange

\* Not for trading, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the New York Stock Exchange.

**Securities registered or to be registered pursuant to Section 12(g) of the Act: None**

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None**

The number of outstanding shares of each class of stock as of December 31, 2020 was:  
**7,442,231,382 Petrobras Common Shares, without par value**

**5,601,969,879 Petrobras Preferred Shares, without par value**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act.

Yes  No

If this report is an annual or transitional report, indicate by check mark if the registrant is not required to file reports pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13 (a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP  International Financial Reporting Standards as issued by the International Accounting Standards Board  Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

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## Disclaimer

*In order to present information to investors in a manner more consistent with how we view our business, last year we altered the structure and order of the disclosure in our annual report on Form 20-F. In this annual report on Form 20-F for the year ended December 31, 2020 (referred to herein as our “annual report”), we have included a cross reference guide to SEC Form 20-F under “Cross-Reference to Form 20-F”, in order to facilitate your review.*

*Unless the context otherwise indicates, please consider this report the annual report of Petróleo Brasileiro S.A. – Petrobras. Unless the context otherwise requires, the terms “Petrobras,” “we,” “us” and “our” refer to Petróleo Brasileiro S.A. – Petrobras and its consolidated subsidiaries, joint operations and structured entities.*

*Our audited consolidated financial statements, presented in U.S. dollars, included in this annual report and the financial information contained in this annual report that is derived therefrom are prepared in accordance with the International Financial Reporting Standards (“IFRS”), as issued by the International Accounting Standards Board (“IASB”).*

*Our functional currency and the functional currency of all of our Brazilian subsidiaries is the Brazilian real and the functional currency of most of our entities that operate outside Brazil, such as Petrobras Global Finance B.V. or PGF, is the U.S. dollar. In this annual report, references to “real,” “reais” or “R\$” are to Brazilian reais and references to “U.S. dollars” or “US\$” are to United States dollars.*

## Forward-Looking Statements

This annual report includes forward-looking statements that are not based on historical facts and are not assurances of future results. The forward-looking statements contained in this annual report, which address our expected business and financial performance, among other matters, contain words such as “believe,” “expect,” “estimate,” “anticipate,” “intend,” “plan,” “aim,” “will,” “may,” “should,” “could,” “would,” “likely,” “potential” and similar expressions (which are not the exclusive means of identifying such forward-looking statements).

**Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. There is no assurance that the expected events, trends or results will actually occur.**

We have made forward-looking statements that address, among other things:

- our marketing and expansion strategy;
- our exploration and production activities, including drilling;
- our activities related to refining, import, export, transportation of oil, natural gas and oil products, petrochemicals, power generation, biofuels and other sources of renewable energy;
- our projected and targeted Capital Expenditures, commitments and revenues;

- our liquidity and sources of funding;
- our pricing strategy and development of additional revenue sources; and
- the impact, including cost, of acquisitions and divestments.

Our forward-looking statements are not guarantees of future performance and are subject to assumptions that may prove incorrect and to risks and uncertainties that are difficult to predict. Our actual results could differ materially from those expressed or forecast in any forward-looking statements as a result of a variety of assumptions and factors. These factors include, but are not limited to, the following:

- our ability to obtain financing;
- general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates;
- global economic conditions;
- our ability to find, acquire or gain access to additional reserves and to develop our current reserves successfully;
- uncertainties inherent in making estimates of our oil and gas reserves, including recently discovered oil and gas reserves;
- competition;
- technical difficulties in the operation of our equipment and the provision of our services;
- changes in, or failure to comply with, laws or regulations, including with respect to fraudulent activity, corruption and bribery;
- receipt of governmental approvals and licenses;
- international and Brazilian political, economic and social developments, including the role of the Brazilian government, as our controlling shareholder, in our business;
- natural disasters, accidents, military operations, acts of sabotage, wars or embargoes;
- global health crises, such as the Covid-19 pandemic;
- the cost and availability of adequate insurance coverage;
- our ability to successfully implement asset sales under our portfolio management program;
- our ability to successfully implement our Strategic Plan, whether that Strategic Plan remains in place, and the direction of any subsequent strategic plans;
- the outcome of ongoing corruption investigations and any new facts or information that may arise in relation to the Lava Jato investigation;
- the effectiveness of our risk management policies and procedures, including operational risk;
- potential changes to the composition of our Board of Directors and our management team; and

- litigation, such as class actions or enforcement or other proceedings brought by governmental and regulatory agencies.

For additional information on factors that could cause our actual results to differ from expectations reflected in forward-looking statements, see “Risks” in this annual report.

All forward-looking statements attributed to us or a person acting on our behalf are qualified in their entirety by this cautionary statement. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events or for any other reason.

The crude oil and natural gas reserve data presented or described in this annual report are only estimates, which involve some degree of uncertainty, and our actual production, revenues and expenditures with respect to our reserves may materially differ from these estimates.



### Documents on Display

We are subject to the information requirements of the Exchange Act, and accordingly our reports and other information filed and furnished by us with the SEC may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You can obtain further information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. You may also inspect our reports and other information at the offices of the New York Stock Exchange, or NYSE, at 11 Wall Street, New York, New York 10005, on which our ADSs are listed. Our SEC filings are also available to the public at the SEC’s website at [www.sec.gov](http://www.sec.gov) and at our website at [www.petrobras.com.br/ir](http://www.petrobras.com.br/ir). The information available on these websites, which might be accessible through a hyperlink resulting from the URLs, is not and shall not be deemed to be incorporated into this annual report. For further information about obtaining copies of our public filings at the NYSE, call (212) 656-5060.

We also furnish reports on Form 6-K to the SEC containing our unaudited consolidated interim financial statements and other financial information of our company.

We also file audited consolidated financial statements, unaudited consolidated interim financial information and other periodic reports with the CVM.

# Glossary

## GLOSSARY OF CERTAIN TERMS USED IN THIS ANNUAL REPORT

Unless the context indicates otherwise, the following terms are defined as follows:

<b>ACL</b>	Free Marketing Environment ( <i>Ambiente de Comercialização Livre</i> ). Market segment in which the purchase and sale of electric energy are the subject of freely negotiated bilateral agreements, according to specific marketing rules and procedures.
<b>ACR</b>	Regulated Marketing Environment ( <i>Ambiente de Comercialização Regulado</i> ). Market segment in which the purchase and sale of electric power between selling agents and distribution agents, preceded by a bidding process, except for cases provided by law, according to specific marketing rules and procedures.
<b>ADR</b>	American Depositary Receipt.
<b>ADS</b>	American Depositary Share.
<b>Amex Oil</b>	The NYSE Arca Oil Index is a price-weighted index of the leading companies involved in the exploration, production, and development of petroleum. It measures the performance of the oil industry through changes in the sum of the prices of component stocks. The index was developed with a base level of 125 as of August 27, 1984.
<b>AMS</b>	Our health care plan ( <i>Assistência Multidisciplinar de Saúde</i> ).
<b>ANP</b>	The <i>Agência Nacional de Petróleo, Gás Natural e Biocombustíveis</i> (National Petroleum, Natural Gas and Biofuels Agency) is the federal agency that regulates the oil, natural gas and renewable fuels industry in Brazil.
<b>API</b>	Standard measure of oil density developed by the American Petroleum Institute.
<b>B3</b>	<i>Brasil, Bolsa, Balcão</i> , the Brazilian Stock Exchange.
<b>BioQav</b>	Fuel produced from several biomass sources in different production processes, also known as “biojet” or “biokerosine” or “SAF” (synthetic aviation fuel) and named by the ANP as “Alternative Jet Fuel”, which must be added to jet fuel up to a maximum limit that varies from 10% to 50% by volume depending on the production process, as defined in ASTM (American Society for Testing and Materials) Annex D-7566 and ANP Resolution 778/2019.

<b>Biofuel</b>	
<b>Barrels</b>	Standard measure of crude oil volume.
<b>BNDES</b>	Brazilian Development Bank ( <i>Banco Nacional de Desenvolvimento Econômico e Social</i> ).
<b>Braskem</b>	Braskem S.A. is currently the largest producer of thermoplastic resins in the Americas and the largest producer of polypropylene in the United States. Its production focuses on polyethylene (PE), polypropylene (PP) and polyvinylchloride (PVC) resins, in addition to basic chemical inputs such as ethylene, propylene, butadiene, benzene, toluene, chlorine, soda, and solvents, among others. Together, they make up one of the most comprehensive portfolios in the industry by also including the green polyethylene produced from the sugarcane, from 100% renewable sources.
<b>Brazilian Treasury</b>	The Brazilian National Treasury is a Federal Government Secretariat, responsible for managing the financial resources that enter in the public safes. The mission of the National Treasury is managing the public accounts in an efficient and transparent way, ensuring a balanced fiscal policy and the quality of public expenditure, in order to contribute to the sustainable economic development.
<b>Brent Crude Oil</b>	A major trading classification of light crude oil that serves as a major benchmark price for commercialization of crude oil worldwide.
<b>CADE</b>	Administrative Council for Economic Defense ( <i>Conselho Administrativo de Defesa Econômica</i> )
<b>Câmara de Arbitragem do Mercado</b>	An arbitration chamber governed and maintained by B3.
<b>Capital Expenditures or "CAPEX"</b>	Capital expenditures based on the cost assumptions and financial methodology adopted in our strategic plans, which includes acquisition of intangible assets and property, plant and equipment, investment in investees and other items that do not necessarily qualify as cash flows used in investing activities, comprising geological and geophysical expenses, research and development expenses, pre-operating charges, purchase of property, plant and equipment on credit and borrowing costs directly attributable to works in progress.
<b>CEO</b>	Chief Executive Officer.
<b>CFO</b>	Chief Financial Officer.
<b>Central Bank of Brazil</b>	The <i>Banco Central do Brasil</i> .
<b>Central Depositária</b>	The <i>Central Depositária de Ativos e de Registro de Operações do Mercado</i> , which serves as the custodian of our common and preferred shares (including those represented by ADSs) on behalf of our shareholders.

<b>CGU</b>	The <i>Controladoria Geral da União</i> (General Federal Inspector's Office) is an advisory body of the Brazilian Presidency responsible for assisting in matters related to the protection of federal public property ( <i>patrimônio público</i> ) and the improvement of transparency in the Brazilian executive branch, through internal control activities, public audits, and the prevention and combat of corruption, among others.
<b>CMN</b>	The <i>Conselho Monetário Nacional</i> (National Monetary Council) is the highest authority of the Brazilian financial system, responsible for the formulation of the Brazilian currency, exchange and credit policy, and for the supervision of financial institutions.
<b>CNODC</b>	CNODC Brasil Petróleo e Gás Ltda.
<b>CNOOC</b>	CNOOC Petroleum Brasil Ltda.
<b>Condensate</b>	Hydrocarbons that are in the gaseous phase at reservoir conditions but condense into liquid as they travel up the wellbore and reach separator conditions.
<b>COMPERJ</b>	The <i>Complexo Petroquímico do Rio de Janeiro</i> (Petrochemical Complex of Rio de Janeiro).
<b>CONAMA</b>	The <i>Conselho Nacional do Meio Ambiente</i> (National Council for the Environment in Brazil).
<b>CNPE</b>	The <i>Conselho Nacional de Política Energética</i> (National Energy Policy Council) is an advisory body of the President of the Republic assisting in the formulation of energy policies and guidelines.
<b>CVM</b>	The <i>Comissão de Valores Mobiliários</i> (Brazilian Securities and Exchange Commission).
<b>D&amp;M</b>	DeGolyer and MacNaughton, an independent petroleum engineer consulting firm that conducts reserves evaluation of part of our net proved crude oil, condensate and natural gas reserves.
<b>Deepwater</b>	Between 300 and 1,500 meters (984 and 4,921 feet) deep.
<b>Depository</b>	JPMorgan.
<b>Distillation</b>	The process by which liquids are separated or refined by vaporization followed by condensation.
<b>DoJ</b>	The U.S. Department of Justice.
<b>E&amp;P</b>	Exploration & Production is our business segment that covers the activities of exploration, development and production of crude oil, NGL and natural gas in Brazil and abroad.
<b>Eletrobras</b>	Centrais Elétricas Brasileiras S.A.
<b>Exchange Act</b>	Securities Exchange Act of 1934, as amended.

<b>EWT</b>	Extended well test.
<b>Fitch</b>	Fitch Ratings Inc., a credit rating agency.
<b>Focus Survey</b>	The Central Bank of Brazil carries out the Focus Survey compiling forecasts of about 140 banks, asset managers and others institutions.
<b>FPSO</b>	Floating production, storage and offloading unit.
<b>G&amp;P</b>	Gas & Power is our business segment that covers the activities of logistics and trading of natural gas and electricity, transportation and trading of LNG, generation of electricity by means of thermoelectric power plants, as well as holding interests in transportation and distribution companies of natural gas in Brazil and abroad. It also includes natural gas processing and fertilizer operations.
<b>Gaspetro</b>	Petrobras Gás S.A. is our subsidiary and a holding company that carries out the commercialization, import, export, storage and distribution of natural gas in Brazil. It consolidates our equity interests in 19 of the 27 state natural gas distributors, with Mitsui holding the remaining 49% interest.
<b>GHG</b>	Greenhouse gas.
<b>GSA</b>	Long-term Gas Supply Agreement entered into with the Bolivian state-owned company Yacimientos Petrolíferos Fiscales Bolivianos.
<b>GTB</b>	Gás Transboliviano S.A.
<b>HCC or Hydrocracking</b>	Conversion of heavier intermediate streams into the middle distillates boiling range (kerosene and diesel) in the presence of specific catalyst, hydrogen and severe conditions of temperature and pressure to produce high quality fuels. Depending on feedstock quality and operational conditions it is possible to direct production towards high quality lubes as well.
<b>HDT or Hydrotreating</b>	Process widely used in oil refining industry to remove heteroatoms such as sulfur and nitrogen from gasoline, kerosene and/or diesel in the presence of specific catalysts, hydrogen and adequate conditions of temperature and pressure. The aim is to adjust composition to comply with fuel specifications.
<b>HSE</b>	Health, Safety and Environmental.
<b>IASB</b>	International Accounting Standards Board.
<b>IBAMA</b>	The <i>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis</i> (Brazilian Institute of the Environment and Renewable Natural Resources).

<b>Ibovespa or IBOV</b>	The gross total return index weighted by free float market cap and comprised of the most liquid stocks traded on the B3. It was created in 1968.
<b>Inovar-Auto</b>	This was a government program that proposed automotive industry to invest in research and development of more efficient and safe vehicles in exchange for tax benefits.
<b>IMO</b>	International Maritime Organization.
<b>IOF</b>	<i>Imposto sobre Operações Financeiras</i> (Brazilian taxes over financial transactions).
<b>IPCA</b>	The <i>Índice Nacional de Preços ao Consumidor Amplo</i> (National Consumer Price Index).
<b>JPMorgan</b>	JPMorgan Chase Bank, N.A.
<b>Lava Jato</b>	Operação Lava Jato, as detailed in “Risks Factors” and “Legal and Tax – Legal Proceedings – Lava Jato Investigation” in this annual report.
<b>LIBOR</b>	The London Interbank Offered Rate is a benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans.
<b>LNG</b>	Liquefied natural gas.
<b>LPG</b>	Liquefied petroleum gas, which is a mixture of saturated and unsaturated hydrocarbons, with up to five carbon atoms, used as domestic fuel.
<b>MME</b>	The <i>Ministério de Minas e Energia</i> (Ministry of Mines and Energy) of Brazil.
<b>Moody’s</b>	Moody’s Investors Service, Inc., a credit rating agency.
<b>ME</b>	The <i>Ministério da Economia</i> of Brazil (Ministry of Economy, former MPDM – <i>Ministério do Planejamento, Desenvolvimento e Gestão</i> ).
<b>Natural Gasoline (C5+)</b>	Natural Gasoline C5+ is a NGL produced at natural gas processing plants with a vapor pressure intermediate between condensate and LPG, that may compose a gasoline blend.
<b>Nelson complexity index (NCI)</b>	It is a pure cost index that provides a relative measure of the construction costs of a particular refinery based on its crude and upgrading capacity. The NCI compares the costs of various upgrading units to the cost of a pure crude distillation unit, where more complex refineries are able to produce lighter, more heavily refined and valuable products from a barrel of oil. While the complexity factor is independent of the refinery capacity, multiple units of the same process, like multiple hydro treaters or coking units, for example, do increase complexity.
<b>NGL</b>	The liquid resulting from the processing of natural gas and containing the heavier gaseous hydrocarbons.

<b>NYSE</b>	The New York Stock Exchange.
<b>OCF</b>	Operating Cash Flow (net cash provided by operating activities).
<b>Oil</b>	Crude oil, including NGLs and condensates.
<b>Oil Products</b>	Produced through processing at refineries such as diesel, gasoline, liquid fuel, LPG and other products.
<b>ONS</b>	The <i>Operador Nacional do Sistema Elétrico</i> (National Electric System Operator) of Brazil.
<b>OPEC</b>	Organization of the Petroleum Exporting Countries.
<b>Operating income (loss)</b>	The line equivalent to Net income (loss) before finance income (expense), results in equity-accounted investments and income taxes derived from our audited consolidated financial statements.
<b>Organic Reserves Replacement Ratio or Organic RRR</b>	Measures the amount of proved reserves added to a company's reserve base during the year, excluding disposals and acquisitions of proved reserves, relative to the amount of oil and gas produced.
<b>OSRL</b>	The Oil Spill Response Limited.
<b>OTC</b>	Offshore Technology Conference.
<b>Petrochemicals</b>	Chemicals obtained in petrochemical industries such as ethane, propene, benzene, xylenes, polypropylene, polyethylene and others.
<b>Petros</b>	Fundação Petros de Seguridade Social, Petrobras' employee pension fund.
<b>Petros 2</b>	Petrobras' sponsored pension plan.
<b>PFLOPS</b>	One PFLOPS equals the processing capacity of a quadrillion mathematical operations per second.
<b>PGF</b>	Petrobras Global Finance B.V.
<b>PifCo</b>	Petrobras International Finance Company S.A.
<b>PLSV</b>	Pipe laying support vessel.
<b>Post-salt reservoir</b>	A geological formation containing oil or natural gas deposits located above a salt layer.
<b>PP&amp;E</b>	Property, plant and equipment.

<b>PPSA</b>	Pré-Sal Petróleo S.A.
<b>Pre-salt Polygon</b>	Underground region formed by a vertical prism of undetermined depth, with a polygonal surface defined by the geographic coordinates of its vertices established by Law No. 12,351/2010, as well as other regions that may be delimited by the Brazilian Federal Government, according to the evolution of geological knowledge.
<b>Pre-salt reservoir</b>	A geological formation containing oil or natural gas deposits located beneath a salt layer.
<b>Proved reserves</b>	Consistent with the definitions in Rule 4-10(a) of Regulation S-X, 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, operating methods, and government regulations. Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price is the unweighted arithmetic average of the first-day-of-the-month price during the twelve-month period prior to December 31, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The project to extract the hydrocarbons must have commenced or we must be reasonably certain that we will commence the project within a reasonable time. Reserves which can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the “proved” classification when successful testing by a pilot project, or the operation of an installed program in the reservoir or an analogous reservoir, provides support for the engineering analysis on which the project or program was based.
<b>Proved developed reserves</b>	Reserves that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or for which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserve estimate if the extraction is by means not involving a well.
<b>Proved undeveloped reserves</b>	Reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required. Reserves on undrilled acreage are limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances. Undrilled locations are classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time. Proved undeveloped reserves do not include reserves attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir or by other evidence using reliable technology establishing reasonable certainty.
<b>PTAX</b>	The reference exchange rate for the purchase and sale of U.S. dollars in Brazil, as published by the Central Bank of Brazil.

<b>R&amp;D</b>	Research and development.
<b>RNEST</b>	The <i>Refinaria Abreu e Lima</i> (Abreu e Lima Refinery).
<b>Refining</b>	Refining, Transportation and Marketing is our business segment that covers the activities of refining, logistics, transport and trading of crude oil and oil products in Brazil and abroad, exports of ethanol, petrochemical operations, such as extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil.
<b>Reserves Replacement Ratio or RRR</b>	Measures the amount of proved reserves added to a company's reserve base during the year relative to the amount of oil and gas produced.
<b>Reserves to production ratio or R/P</b>	Calculated as the amount of proved reserves of the year relative to the amount of oil and gas produced during the year, indicates a number of years reserves would last if production remains constant.
<b>S&amp;P</b>	Standard & Poor's Financial Services LLC, a credit rating agency.
<b>SEC</b>	The United States Securities and Exchange Commission.
<b>SELIC</b>	The Central Bank of Brazil base interest rate.
<b>Sete Brasil</b>	Sete Brasil Participações, S.A.
<b>Shell</b>	Shell Brasil Petróleo Ltda.
<b>Synthetic oil and synthetic gas</b>	A mixture of hydrocarbons derived by upgrading (i.e., chemically altering) natural bitumen from oil sands, kerogen from oil shales, or processing of other substances such as natural gas or coal. Synthetic oil may contain sulfur or other non-hydrocarbon compounds and has many similarities to crude oil.
<b>SPE</b>	Society of Petroleum Engineers.
<b>SS</b>	Semi-submersible platform.
<b>Strategic Plan</b>	2021-2025 Strategic Plan
<b>TAG</b>	Transportadora Associada de Gás S.A. is a company operating in the natural gas transportation industry, currently holding long-term permits to operate and manage a 4,500 km gas pipeline system, located mainly in the North and Northeast regions of Brazil, with installed capacity of 75 million m <sup>3</sup> /d.

<b>TCU</b>	The <i>Tribunal de Contas da União</i> (Federal Auditor's Office) is a constitutionally established body linked to the Brazilian Congress, responsible for assisting it in matters related to the supervision of the Brazilian Federal Government and its resources with respect to accounting, finance, budget, operational and public property ( <i>patrimônio público</i> ) matters.
<b>TBG</b>	Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. is a company operating in the natural gas transportation industry, currently holding long-term permits to operate and manage a 2,593 km gas pipeline system, located mainly in the South and Southeast regions of Brazil, with installed capacity of 30 million m <sup>3</sup> /d. Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. is connected to GTB, which permits access to Bolivian natural gas.
<b>TJLP</b>	The Brazil long-term interest rate (Taxa de Juros de Longo Prazo) is set quarterly by the National Monetary Council. The rate is used as the benchmark rate for loans from the BNDES to companies.
<b>Total</b>	Total E&P do Brasil Ltda.
<b>Transfer of Rights Agreement</b>	An agreement under which the Brazilian Federal Government assigned to us the right to explore and produce up to five billion barrels of oil equivalent "bnboe") in specified pre-salt areas in Brazil. See "Material Contracts" in this annual report.
<b>Transpetro</b>	Petrobras Transporte S.A.
<b>TRI</b>	Total recordable injury per million man-hour frequency rate.
<b>Ultra-deepwater</b>	Over 1,500 meters (4,921 feet) deep.
<b>UPGN</b>	Natural-gas processing Units (Unidade de Processamento de Gás Natural, in Portuguese). A natural gas processing plant is a facility designed to process raw natural gas from the offshore production fields by separating impurities and various non-methane hydrocarbons and fluids through different technologies to produce specified natural gas for final consumption. Through the process a gas processing plant can also recover natural gas liquids (condensate, natural gasoline and liquefied petroleum gas) with higher added value.
<b>YPFB</b>	Yacimientos Petrolíferos Fiscales Bolivianos.



**About us**

# About us

We are a Brazilian company with over 49,000 employees committed to generate more value for our shareholders and the society, with a focus on oil and gas, with safety and respect for people and the environment. We are one of the largest companies in market capitalization in Latin America, with a market capitalization of US\$72.5 billion as of December 31, 2020. We are one of the largest producers of oil and gas in the world, primarily engaged in exploration and production, refining, energy generation and trading. We have a large proven reserve base and have acquired expertise in deep and ultra-deepwater exploration and production as a result of almost 50 years spent developing the Brazilian offshore basins, becoming world leaders in this segment.



## Datasheet

**Name of the company:** Petróleo Brasileiro S.A. – Petrobras

**Date of Incorporation:** 1953

**Country of Incorporation:** Brazil

**Registration number at the CVM:** 951-2

**Central Index Key (or “CIK”) at the SEC:** 0001119639

**Address of principal executive office:** Avenida República do Chile 65, 20031-912, Rio de Janeiro, RJ, Brazil

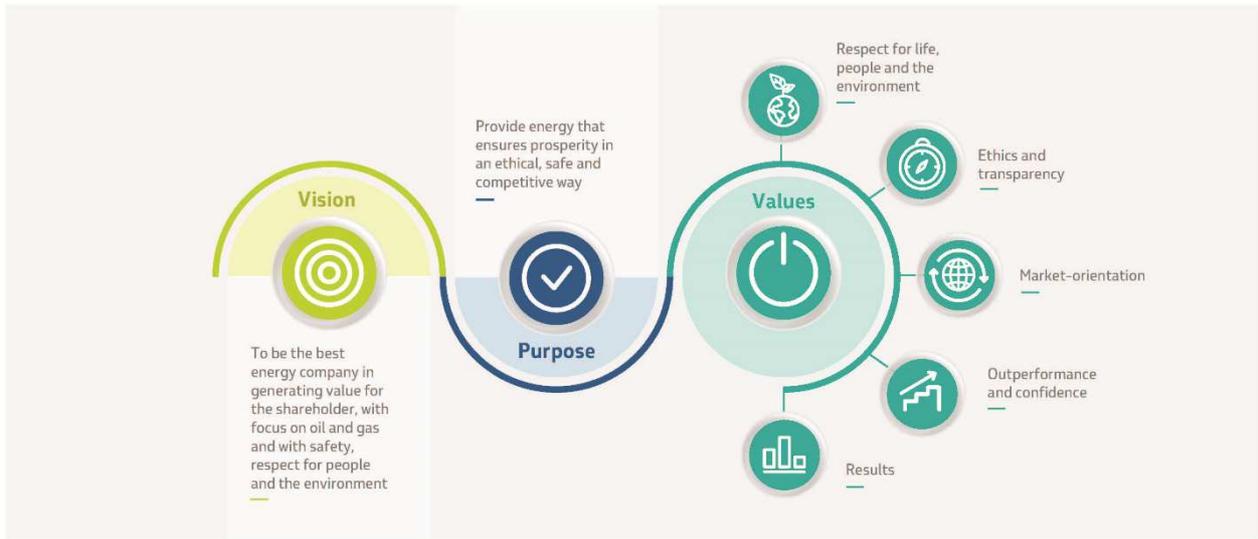
**Telephone number:** (55 21) 3224 4477

**Corporate and investor relations websites:** [www.petrobras.com.br](http://www.petrobras.com.br) and [www.petrobras.com.br/ir](http://www.petrobras.com.br/ir).

The information on these websites, which might be accessible through a hyperlink resulting from both URL, is not and shall not be deemed to be incorporated into this annual report.

**Corporate purpose established in our Bylaws:** research, extraction, refining, processing, trading and the transport of oil, its by-products, natural gas and other fluid hydrocarbon from wells, shale and other rocks, in addition to energy-related activities, and the research, development, production, transport, distribution, sale and trading of all forms of energy, and other related activities or similar purposes.

## Overview



We have a large base of proved reserves and operate and produce the majority of Brazil’s oil and gas. The majority of our proved reserves are located in the adjacent offshore Campos and Santos Basins in southeast Brazil. Their proximity allows us to optimize our infrastructure and limit our costs of exploration, development and production. Additionally, we have developed technical knowledge in deepwater exploration and production from almost 50 years of developing Brazil’s offshore basins, including the Campos and Santos Basins. The Campos and Santos Basins are expected to remain the main source of our future growth in proved reserves and oil and gas production.

Our business, however, goes beyond the oil and gas exploration and production. It entails a long process through which we get the oil and gas to our refineries and gas treatment units which themselves must be equipped and in constant evolution to supply the best products.

We operate the majority of the refining capacity in Brazil. Our refining capacity is substantially concentrated in southeast Brazil, within the country’s most populated and industrialized markets and adjacent to the sources of most of our crude oil in the Campos and Santos Basins. We meet our demand for oil products through a planned combination of domestic refining of crude oil and oil products imports, seeking value creation. We are also involved in the production of petrochemicals through stakes in some companies. We distribute oil products through wholesalers and retailers.

We also participate in the Brazilian natural gas market, including the logistics, distribution and processing of natural gas.

To meet domestic demand, we process natural gas derived from our onshore and offshore production (mainly from fields in the Campos, Espírito Santo and Santos Basins), import natural gas from Bolivia and import liquefied natural gas (“LNG”) through our regasification terminals. We also participate in the domestic power market primarily through our investments in gas-fired, fuel oil and diesel oil thermoelectric power plants and in renewable energy.

We currently divide our business into three main segments:

- **Exploration and Production (“E&P”):** this segment covers the activities of exploration, development and production of crude oil, Natural Gas Liquids (“NGL”) and natural gas in Brazil and abroad, for the primary purpose of supplying our domestic refineries. The E&P segment also operates through partnerships with other companies, including holding interests in non-Brazilian companies in this segment.
- **Refining, Transportation and Marketing (“Refining”):** this segment covers the activities of refining, logistics, transport, marketing and trading of crude oil and oil products in Brazil and abroad, exports of ethanol, petrochemical operations, such as extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil.
- **Gas and Power (“G&P”):** this segment covers the activities of logistics and trading of natural gas and electricity, transportation and trading of LNG, generation of electricity by means of thermoelectric power plants, as well as holding interests in transportation and distribution companies of natural gas in Brazil and abroad. It also includes natural gas processing and fertilizer operations.

Activities that are not attributed to the business segments are classified as “Corporate and Other Businesses” including, notably those related to corporate financial management, corporate overhead and other expenses, provision for the class action settlement, and actuarial expenses related to the pension and medical benefits for retired employees and their dependents. It also comprises biofuels and distribution businesses. The biofuels business covers the activities of production of biodiesel and its co-products and ethanol. The distribution business covers the equity interest in the associate BR Distribuidora and the business for the distribution of oil products abroad (South America).

For further information regarding our business segments, see Notes 13 and 33 to our audited consolidated financial statements, as well as “Operating and Financial Review and Prospects” in this annual report.

In 2020 we had activities in eight countries besides Brazil (i.e., Argentina, Bolivia, Colombia, Uruguay, the U.S., Netherlands, United Kingdom and Singapore). In Latin America, our operations include exploration and production, marketing, and retail services, including natural gas. In North America, we produce oil and gas through a joint venture. We have controlled companies in London, Rotterdam, Houston, and Singapore that support our trade and financial activities. They constitute a complete and active trading desk for markets worldwide, responsible for market intelligence and marketing of oil, oil products, natural gas, commodity derivatives and shipping. Beginning in 2021, we will end our European trading activities in the United Kingdom and concentrate them only in the Netherlands. In February 2021 we ended our operational activities in Uruguay with the sale of our shares in the distribution company.

We operate through 20 direct subsidiaries (18 incorporated under the laws of Brazil and two incorporated abroad) and two direct joint operations as listed below. We also have indirect subsidiaries, including Petrobras Global Finance B.V. (“PGF”).

Companies	Location	Our shareholding	Other shareholders
Petrobras Transporte S.A. – Transpetro	Brazil	100%	—
Petrobras Logística de Exploração e Produção S.A. – PB-LOG	Brazil	100%	—
Petrobras Gás S.A. – Gaspetro	Brazil	51%	Mitsui Gás e Energia do Brasil Ltda (49%)
Petrobras Biocombustível S.A.	Brazil	100%	—
Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. – TBG	Brazil	51%	BBPP Holdings Ltda. (29%) YPFB Transporte S.A. (12%) GTB-TBG Holdings S.À.R.L. (8%)
Procurement Negócios Eletrônicos S.A.	Brazil	72%	SAP Brasil Ltda. (17%) Accenture do Brasil S.A. (11%)
Araucária Nitrogenados S.A.	Brazil	100%	—
Termomacaé S.A.	Brazil	100%	—
Breitener Energética S.A.	Brazil	94%	Alcântara, Mendes & Cia Ltda (1%) Arcadis Logos Energia S.A. (1%) Orteng Equipamentos e Sistemas Ltda (1%) GGR Participações S.A. (3%)
Termobahia S.A.	Brazil	99%	Petros (1%)
Baixada Santista Energia S.A.	Brazil	100%	—
Petrobras Comercializadora de Energia S.A. – PBEN	Brazil	100%	—
Fundo de Investimento Imobiliário RB Logística – FII	Brazil	99%	Pentágono SA DTVM (1%)
5283 Participações S.A.	Brazil	100%	—

Fábrica Carioca de Catalisadores S.A. – FCC <sup>(1)</sup>	Brazil	50%	Albemarle Brazil Holding Ltda. (50%)
Ibiritermo S.A. <sup>(1)</sup>	Brazil	50%	Edison S.p.A (50%)
Petrobras International Braspetro – PIB BV	Abroad	100%	—
Braspetro Oil Services Company – Brasoil	Abroad	100%	—
Refinaria Mucuripe S.A. <sup>(2)</sup>	Brazil	100%	—
Refinaria de Manaus S.A. <sup>(2)</sup>	Brazil	100%	—
Paraná Xisto S.A. <sup>(2)</sup>	Brazil	100%	—
Refinaria Mataripe <sup>(2)</sup>	Brazil	100%	—

(1) Joint operations.

(2) Companies legally established, with capital contribution of US\$ 58.000 for each company, for the subsequent divestment of these refineries.

For a complete list of our subsidiaries and joint operations, including each of their full names, jurisdictions of incorporation and our percentage of equity interest, see Exhibit 8.1 to this annual report and Note 30 to our Financial Statements. Additionally, we participate in consortia that engage in the exploration of blocks and the production of oil fields in Brazil – see “Our Business, E&P, Overview” for more details.

2020 HIGHLIGHTS



1) Operating Income/Loss is equivalent to the line item Net income (loss) before finance income (expense), results in equity-accounted investments and income taxes derived from our audited consolidated financial statements.

2) Dividends declared in reais and converted into U.S. dollars at the applicable exchange rate. ADS holders will receive these distributions in proportion to the number of underlying common or preferred shares that such ADSs represent.

3) The TRI result achieved in 2020 represents an important improvement compared to the 2019 TRI result. In 2019, our TRI result was the lowest among our peers, according to the results published in the Shell, ExxonMobil, Equinor and BP Sustainability reports.

2020 HIGHLIGHTS



Operational Indicators

Oil and Natural Gas Production (Millions boed)

2.63 2.77 2.84



2018 2019 2020

Refining Cost (US\$/bbl)

2.51 2.46 1.70



2018 2019 2020

Power Generation (Average MW)

2,205 2,028 1,756



2018 2019 2020

Lifting Cost - Brazil<sup>1)</sup> (US\$/boe)

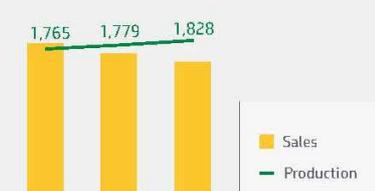
8.9 7.8 5.2



2018 2019 2020

Brazilian Sales and Oil Products Production (Mbb/d)

1,807 1,754 1,664



2018 2019 2020

Proved Reserves (Millions boe)

9,606 9,590 8,816



2018 2019 2020

Carbon Intensity - Refining (Kg CO<sub>2</sub>e/CWT)

42.0 41.7 40.2



2018 2019 2020

Carbon Intensity - E&P (Kg CO<sub>2</sub>e/boe)

17.5 17.3 15.8



2018 2019 2020

<sup>1)</sup> Does not include leases.

## Recent Developments

### Pending Changes in our Senior Management and Board of Directors

The Brazilian federal government controls a majority of our voting shares and has the right to elect a majority of the members of our Board of Directors. Our Board of Directors, in turn, selects our management.

On February 19, 2021, the Brazilian federal government, through the Ministry of Mines and Energy (MME), issued a formal notice (*ofício*) to the Chairman of our Board of Directors requesting that the Chairman call a general shareholders meeting for the election of Directors. The notice designated Joaquim Silva e Luna to replace Roberto da Cunha Castello Branco as a Director, based on the Brazilian federal government's power to remove members of the Board of Directors. It also requested the Board of Directors to subsequently consider and elect Mr. Silva e Luna to replace Mr. Castello Branco as our CEO. Media reports have suggested that the decision to replace Mr. Castello Branco was related to our February 2021 announcement of increases in prices for diesel and gasoline products.

Under Brazilian law, the removal of a Director elected by cumulative voting automatically results in the removal of all other Directors elected through the same mechanism. Mr. Castello Branco and seven other Directors were elected by cumulative voting in the July 2020 Ordinary Shareholders Meeting. The MME notice proposed that, at the meeting to replace Mr. Castello Branco, the other Directors be re-elected for the balance of their terms. However, five of the seven have since announced that they would not accept their nomination for the election (João Cox Neto, Nivio Ziviani, Paulo Cesar de Souza e Silva, Omar Carneiro da Cunha Sobrinho and Leonardo Pietro Antonelli).

On March 5, 2021, the Brazilian federal government, through MME and the Ministry of Economy, designated six individuals for election to the Board of Directors: Eduardo Bacellar Leal Ferreira (for Chairman of the Board), Joaquim Silva e Luna, Ruy Flaks Schneider, Márcio Andrade Weber, Murilo Marroquim de Souza and Sonia Julia Sulzbeck Villalobos.

On March 8, 2021, minority shareholders designated Leonardo Pietro Antonelli for a Board position in the event that the election is conducted using cumulative voting. Under Brazilian law, the election of our Board members must be by cumulative voting if requested by holders of at least 5% of the outstanding shares. If cumulative voting is adopted, the Brazilian federal government may not be able to elect all of its designees in the general shareholders meeting.

On March 10, 2021, the Brazilian federal government, through MME, designated two more individuals for election to the Board of Directors: Cynthia Santana Silveira and Ana Silvia Corso Matte. These additional designations completed the list of eight nominees by the Brazilian federal government.

On March 11, 2021, our Board of Directors called an Extraordinary General Meeting, to be held on April 12, 2021, for the election of eight Directors.

## Continuing Uncertainty Concerning our Senior Management and Board of Directors

The election of our Board of Directors will take place at the Extraordinary General Meeting to be held on April 12, 2021. This meeting may provide more definition about the future of Petrobras, the composition of our Board of Directors and our management team. However, the situation is changing rapidly and there can be no certainty as to the outcome of that meeting, the composition of our Board of Directors or our management team.

For a current list of our Executive Officers and Board of Director members as of the date of this annual report, see “Management and Employees – Management” and “Management and Employees – Executive Officers” in this annual report.

It is possible that members of our Board of Directors may resign prior to the Extraordinary General Meeting. Our CEO is expected to depart once his removal is approved by a majority of votes at the Extraordinary General Meeting. It is also possible that our CFO and other members of our senior management may depart, whether by termination or resignation, after the Extraordinary General Meeting. On March 24, 2021, four of our executive officers, Andrea Almeida, Chief Financial and Investor Relations Officer, Carlos Alberto Pereira de Oliveira, Chief Exploration and Production Officer, André Chiarini, Chief Trading and Logistics Officer, and Rudimar Andreis Lorenzatto, Chief Production Development Officer, informed our Board that they do not intend to renew their respective terms in such positions. Although their terms expired on March 20, 2021, they will continue to serve until their successors are appointed, in accordance with Brazilian law. On March 24, 2021, our Board approved the appointment of Salvador Dahan as our new Chief Governance and Compliance Officer, to be effective following completion of all internal processes. If there are vacancies at the Board of Directors or in senior management, it is possible that such positions will not be filled promptly.

The potential changes to the composition of our Board of Directors and our management team may result in significant additional uncertainty. It is difficult to predict the future strategic, business or policy decisions or views that any newly-elected members of our Board of Directors or our management team may take or have, and we cannot predict how this will affect our business, our results of operations and our financial condition, which could in turn adversely affect the value of our securities.

## Potential Changes to our Strategic Plan and our Pricing Policies

Our Strategic Plan consists of our continuous evaluation of the business environment and the implementation of our strategies, allowing for adjustments to be made in a more efficient way. See “Strategic Plan—2021-2025 Strategic Plan” in this annual report. The recent developments described above, including any changes to our Board of Directors and our management team, may affect not only our ability to implement our Strategic Plan, but whether that Strategic Plan remains in place, as well as the direction of any subsequent strategic plans, including decisions related to the management of our operations and investments.

Our current pricing policy in Brazil takes into account domestic market conditions and seeks to align the price of oil products with international prices. Specifically, diesel oil, gasoline, LPG, jet fuel, fuel oil and other minor product prices are defined taking into account the international import parity price, margins to remunerate the risks inherent in our operations and the level of market share.

In 2021, we raised fuel prices according to international price parity as global oil prices surged. Although we announced increases in fuel prices in early March, on March 24, 2021, we announced that we would decrease wholesale diesel prices by 4.2% and wholesale gasoline prices by 4.4%, effective on March 25, 2021. For more information, see “Risks—Financial Risks—Our cash flow and profitability are exposed to the volatility of prices of oil, gas and oil products” and “Our Business—Refining, Transportation and Marketing—Marketing—Oil products prices.” The Brazilian federal government has recently made statements regarding the need to modify and adjust our pricing policy for domestic conditions.

In February 2021, the Brazilian federal government announced, for a two-month period, changes in state fuel taxes, and in March 2021, announced that it would eliminate federal taxes on diesel fuel (for two months) and residential LPG.

In view of the statements made by the Brazilian President and the recent developments described above, the new CEO, the new management team or the new Board of Directors may propose changes to our pricing policies, including a decision that such policies will not seek for alignment with international price parity. Changes to our fuel pricing policy could have a material adverse effect on our business and prospects, our results of operations and our financial condition, which could in turn adversely affect the value of our securities.

## Lava Jato Investigation

In 2021, the Brazilian Supreme Court started to decide cases brought by criminal defendants in Lava Jato proceedings aimed at nullifying criminal convictions relating to the investigation. These cases are still in progress and their outcomes may affect our interests. For more information, see “Risks—Risk Factors—We may face additional proceedings related to the Lava Jato investigation” and “Legal and Tax—Legal Proceedings—Lava Jato Investigation” in this annual report.

## Risk Factors

The recent developments described above may materially and adversely impact our business, prospects, results of operations and financial condition, and the value of our securities. The role of the Brazilian federal government as our controlling shareholder presents specific risks for investors. For more information, see “Risks—Government Ownership and Country Risks” in this annual report.



**Risks**

# Risks

The nature of our operations exposes us to a number of risks that could, individually or together, have an effect on our financial performance. We classify the risks to which we are exposed in the following groups: (i) operational risks, (ii) financial risks, and (iii) compliance, legal and regulatory risks. We also describe herein the risks arising from the government ownership and country risks, as well as debt and equity securities risks.



## Operational

Includes risks arising from our core activities, in addition to risks arising from failures, deficiencies or inadequacies of internal processes, the supply of goods and services, systems, as well as natural disasters and/or actions from third parties.



## Financial

Includes risks arising from market fluctuations, defaults on counterparties and mismatches between assets and liabilities.



## Compliance

Includes risks arising from non-compliance with legislation and regulations applicable to our business, as well as internal rules and procedures, especially those related to fraud, corruption, money laundering and the reliability of financial reports.

## Risk Factors

### Operational Risks

***We are exposed to health, environment and safety risks in our operations, which may lead to accidents, significant losses, administrative proceedings and legal liabilities.***

Some of our main activities present risks capable of leading to accidents, such as oil spills, product leaks, fires and explosions. In particular, deepwater, ultra-deepwater and refining activities present various risks, such as oil spills and explosions in our refineries and exploration and production units, including platforms, ships, pipelines, terminals and dams, among other assets owned or operated by us. These events may occur due to technical failures, human errors or natural events, among other factors. The occurrence of one of these events, or other related incidents, may result in various damages such as death, and serious environmental damage, and may impact our workforce or communities. They may cause property damage, loss of production, financial losses and, in certain circumstances, liability in civil, labor, criminal, environmental and administrative lawsuits. As a consequence, we may incur expenses for cleaning, repairing or remedying the damages caused.

We are also exposed to corporate security risks from acts of intentional interference by third parties in our downstream areas and pipelines, including illegal taps (thefts) of oil, gas and oil products, especially in the states of São Paulo and Rio de Janeiro. If this interference continues, we may experience short-term or long-term accidents, leaks or damage in our facilities as a result, which can impact the continuation of our operations. In addition, we may be compelled to indemnify for any damages caused to the environment or to third parties because of these incidents. In addition, public health epidemics and pandemics such as the Covid-19 outbreak could cause health restrictions to our workforce and, therefore, impact the operation of some of our facilities, including our platforms, refineries, terminals, among others. This condition could have a negative impact on our results and financial condition. Finally, due to risks such as those mentioned above, we may face difficulties in obtaining or maintaining operating licenses and may suffer damages to our image and reputation.

***Changes in the competitive environment of the Brazilian oil and gas market may intensify the requirements for our performance levels to remain in line with the best companies in the sector. The need to adapt to an increasingly competitive and more complex environment may compromise our ability to implement our current Strategic Plan or any subsequent plans adopted.***

We may face greater competitive forces in the downstream segment in Brazil, with the emergence of new companies competing against us in this sector. If we are unable to maximize return on capital employed, reduce costs, sell our products competitively, and implement new technologies in our business, we may encounter adverse effects on our results and operations.

Additionally, in the upstream segment, we may not be successful in acquiring exploration blocks in future bidding rounds if our competitors are able to bid based on better cost and capital structures than us. In that case, we may therefore have difficulty in repositioning our portfolio towards upstream assets that offer higher profitability and competitive advantage, especially in the pre-salt layer, which could negatively affect our results.

In addition, changes in the regulatory framework and inquiries regarding compliance with antitrust and competition laws may subject us to penalties, business restrictions and difficulties in renewing concessions, adversely affecting our operations, results and reputation.

In order to create a favorable environment for new investors to enter the natural gas and refining industries in Brazil, we signed commitment agreements with the Administrative Council for Economic Defense (CADE) and the National Petroleum, Natural Gas and Biofuels Agency (ANP). Under the agreements, we committed to include some of our shareholding participation in companies and assets of the gas transportation and distribution segments in our divestment program and to renounce some of the contracted transportation network capacity (of injection and withdrawal volumes), which would create more competitive conditions to encourage new economic agents to enter the downstream market. Failure to comply with these commitment agreements may result in negative impacts such as administrative proceedings and fines.

***Failures in our information technology systems, information security (cybersecurity) systems and telecommunications systems and services can adversely impact our operations and reputation.***

Our operations are highly dependent on information technology and communications systems and services. Interruption or malfunction affecting these systems and/or their infrastructure, as a result of obsolescence, technical failures and/or deliberate acts, may harm or halt our business and adversely impact our operations and reputation.

Moreover, information security failures, including automation systems, either due to external acts, deliberate or unintentional, such as malware, hacking and cyberterrorism, or internal ones, such as negligence and misuse from employees or contractors, may also cause impacts on our business, our reputation, our relationship with stakeholders and external agents (government, regulatory bodies, partners, suppliers and others), our strategic positioning towards our competitors and our results. According to Law No. 13,709/2018 – *Lei Geral de Proteção de Dados Pessoais* (“LGPD”), we will be subject to penalties in cases of disclosure or misuse of personal information.

***The selection and development of our investment projects have risks that may affect our expected results.***

We have numerous project opportunities in our portfolio of investments. Since most projects are characterized by a long development period, we may face changes in market conditions, such as changes in prices, consumer preferences and demand profile, exchange and interest rates and financing conditions of projects that may jeopardize our expected rate of return on these projects.

We also face specific risks for oil and gas projects. Despite our experience in the exploration and production of oil in deepwater and ultra-deepwater and the continuous development of studies during the planning stages, the quantity and quality of oil produced in a certain field will only be fully known in the phases of deployment and operation, which may require adjustments throughout the project lifecycle and its expected rate of return.

Furthermore, decommissioning projects have grown and become more relevant to our portfolio as concession contracts and production systems expire. With the recent publication of Resolution ANP 817/2020, we might face some difficulties in defining the scope of these decommissioning projects and meeting the regulation requirements, particularly in light of our and the industry’s learning curve in this area.

Moreover, despite our experience in exploration and production, we may face new technical challenges as we move closer to the technology frontier.

In addition, public health epidemics and pandemics such as the Covid-19 outbreak could cause restrictions on our workforce, partners and suppliers, that could have an impact in the productivity of various activities.

***External factors could impact the successful implementation of our partnerships and our portfolio management.***

Pursuant to our Strategic Plan, our divestment portfolio includes several assets in different stages of the sales process, which we expect to conclude in the coming years.

External factors, such as the decline of oil prices, exchange rate fluctuations, the deterioration of the Brazilian economy and global economic conditions, the Brazilian political scenario, judicial and administrative decisions, the passing of new laws, among other unpredictable factors, may reduce, delay or hinder sale opportunities for these assets or affect the price at which we can sell them.

Our Strategic Plan is adapted from time to time by our management; we cannot assure you that our Strategic Plan will not be changed in the future. In the event our Strategic Plan changes based on the decisions of the Brazilian federal government as our controlling shareholder, our divestment plan might be revised. See “—Risks Relating to Our Relationship with the Brazilian Federal Government—The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us” and “Recent Developments” in this annual report. In addition, any changes to our Board of Directors and our management team may affect not only our ability to implement our Strategic Plan, but whether that Strategic Plan remains in place, as well as the direction of any subsequent strategic plans, including decisions related to the management of our operations and investments. See “Recent Developments” in this annual report.

If we are unable to successfully implement our planned partnerships and divestments, or if our divestment plan is modified, this may negatively impact our business, results and financial condition, including by potentially exposing us to short and medium-term liquidity constraints.

***Climate change could impact our results and strategy.***

Climate change poses new challenges and opportunities for our business. More stringent environmental regulations can result in the imposition of costs associated with greenhouse gas emissions, either through environmental agency requirements relating to mitigation initiatives or through other regulatory measures such as carbon pricing taxation limitations on greenhouse gas emissions, which have the potential to increase our operating costs and reduce production.

In addition, environmental laws that may be implemented in the future could increase litigation risks and have a material adverse effect on us.

The risks associated with climate change could also include difficulties to access capital due to public image issues with investors; changes in the consumer profile, with reduced consumption of fossil fuels; and energy transitions in the world economy, towards a lower carbon matrix, with the insertion of substitute products for fossil fuels and the increasing use of electricity for urban mobility. These factors may have a negative impact on the demand for our products and services and may jeopardize or even impair the implementation and operation of our businesses, adversely impacting our results and financial condition and limiting some of our growth opportunities.

***Maintaining our long-term objectives for oil production depends on our ability to successfully obtain and develop oil reserves.***

Our ability to maintain our long-term objectives for oil production is highly dependent upon our ability to obtain additional reserves and to successfully develop our existing reserves.

Our ability to obtain additional reserves depends upon exploration activities, which demand significant capital investments, expose us to the inherent risks, and may not lead to the discovery of commercially producible crude oil or natural gas reserves. We may also obtain additional reserves by proposing and implementing new development projects. Deepwater reservoirs exploitation demands significant investments and involves numerous factors beyond our control, such as significant changes in economic conditions, delays in availability of offshore equipment and critical resources, and unexpected operational conditions, including equipment failures or incidents, that may cause operations to be curtailed, delayed or cancelled.

In addition, increased competition in the oil and gas sector in Brazil and our own capital constraints may make it more difficult or costly to obtain additional acreage in bidding rounds for new contracts and to explore existing contracted areas.

***We are not insured against business interruption for our Brazilian operations, and most of our assets are not insured against war or sabotage.***

We generally do not maintain insurance coverage for business interruptions of any nature for our Brazilian operations, including business interruptions caused by labor disputes. If, for instance, our workers or those of our key third-party suppliers, vendors and service providers were to strike, the resulting work stoppages could have an adverse effect on us. In addition, we do not insure most of our assets against war or sabotage. Therefore, an attack or an incident causing an interruption of our operations could have a material adverse effect on our results and financial condition.

Additionally, our insurance policies do not cover all types of risks and liabilities related to safety, environment, health, government fees, fines or punitive damages, which may impact our results. There can be no guarantee that incidents will not occur in the future, that there will be insurance to cover the damages or that we will not be held responsible for these events, all of which may negatively impact our results.

In addition, we cannot guarantee that the amounts of insurance coverage contracted to cover risks related to our activities will be sufficient to guarantee, in the event of a claim, the payment of all damages caused, which may adversely affect our business and results.

***Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors could adversely affect our results and our business.***

Disagreements on how we manage our business, in particular divestments and their implications for our personnel, changes in our strategy, human resources policies regarding remuneration, benefits and headcount, employee contributions to cover the deficit of our pension plan, implementation of regulations recently created relating to health and pension plans and changes in labor law may lead to judicial inquiries, labor unrest, strikes and stoppages.

Strikes, work stoppages or other forms of labor unrest at any of our facilities or in major suppliers, contractors or their facilities or in sectors of society that affect our business could impair our ability to complete major projects and impact our ability to continue our operations and achieve our long-term objectives.

Our success also depends on our ability to continue to train and qualify our personnel so they can assume qualified senior positions in the future. We cannot assure you that we will be effective in training and qualifying our workforce sufficiently, nor that we will be able to achieve this goal without incurring additional costs. Any such failure could adversely affect our results and our business.

***We rely on suppliers of goods and services for the operation and execution of our projects and, as a result, we may be adversely affected by failures or delays of such suppliers.***

We are susceptible to the risks of performance and product quality within our supply chain. If our suppliers and service providers delay or fail to deliver goods and services owed to us, we may not meet our operational goals within the expected timeframe. In this case, we may ultimately need to postpone one or more of our projects, which may have an adverse effect on our results and financial condition.

Additionally, there may be risks of delays in the customs clearance process caused by external factors, which may impact the supply of goods to us and affect our operations and projects.

Furthermore, disruptions due to health events such as Covid-19 could have a negative impact on our results and on our supply chain as well.

***Our projects and operations may affect, and be affected by, the expectations and dynamics of the communities where we operate, impacting our business, image and reputation.***

It is part of our policy to respect human rights and maintain responsible relationships with the local communities located where we operate. However, the various locations where we operate are exposed to a wide range of issues related to political, social and economic instability, as well as intentional acts, such as illegal diversion, crime, theft, sabotage, terrorism, roadblocks and protests. We cannot control the changes in local dynamics and the expectations of the communities where we operate and establish our businesses.

Social impacts that result from our decisions and direct and indirect activities – especially those related to divestments – and disagreements with these communities and local governments may affect the schedule or budget of our projects, hinder our operations due to potential lawsuits, have a negative financial impact and harm our image and reputation.

***Water scarcity in some regions where we operate may impact the availability of water in the quantity and/or quality required for our operations, as well as difficulties in obtaining grants of the right to use water resources, impacting the business continuity of our industrial units.***

We have industrial facilities that demand the use of water, ranging from large users such as refineries to small users like distribution bases and terminals that, although not very hydro-intensive, are logistically important within our chain. In recent years, several regions of the world, including some regions in Brazil, have experienced events of shortage of freshwater, including for public consumption. In case of water scarcity, the grants pursuant to which we have the right to use water resources may be suspended

or temporarily modified and, as a result, we may be required to reduce or suspend our production activities, because the availability of water for public consumption and watering of animals has priority over industrial use. This may jeopardize our business continuity, as well as generate financial impacts on us and our image.

***Developments in the economic environment and in the oil and gas industry and other factors have resulted, and may result, in substantial write-downs of the carrying amount of certain of our assets, which could adversely affect our results and financial condition.***

We evaluate on an annual basis, or more frequently when the circumstances require, the carrying amount of our assets for possible impairment. Our impairment tests are performed by a comparison of the carrying amount of an individual asset or a cash generating unit with its recoverable amount. Whenever the recoverable amount of an individual asset value or cash generating unit is less than its carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount.

Changes in the economic, regulatory, business or political environment in Brazil or other markets where we operate, such as the recent significant decline in international crude oil and gas prices, the depreciation of the *real*, as well as changes in financing conditions, such as deterioration of risk perception and interest rates, for such projects, among other factors, may affect the original profitability estimates of our projects, which could adversely affect our results.

***The ability to develop, adapt, access new technologies and take advantage of opportunities related to innovations in digital technology is fundamental to our competitiveness.***

The availability of technologies that ensure the maintenance of our reserve rates and the viability of production in an efficient manner, as well as the development of new products and processes that respond to environmental regulations and new market trends, play a key role in increasing our long-term competitiveness. In the event some disruptive technology is introduced into the energy industry, changing performance standards, it would be important for us to have access to this technology, which may impact our competitiveness in relation to other companies.

Recent advances in data acquisition and analysis, connectivity, artificial intelligence, robotics and other technologies are changing the sources that create competitive advantage. Eventual failure to capture these opportunities may have an impact on our competitiveness in the energy market and our long-term objectives.

***Our crude oil and natural gas reserve estimates involve some degree of uncertainty, which could adversely affect our ability to generate income.***

Our proved crude oil and natural gas reserves set forth in this annual report are the estimated quantities of crude oil and natural gas that geological and engineering data demonstrate with reasonable certainty to be economically producible from a given date forward from known reservoirs under existing economic and operating conditions (i.e. using prices and costs as of the date the estimate is made) according to applicable regulations. Reserve estimates presented are based on assumptions and interpretations, which are subject to risks and uncertainties. If the geological and

engineering data that we use to estimate our reserves are not accurate, our reserves may be lower than the ones currently indicated in the volume estimates of our portfolio and reported by companies that conduct an evaluation on our reserves estimates. In addition, reserve estimates may be affected by significant changes in economic conditions. Downward revisions in our reserve estimates indicate lower future production, which could have an adverse effect on our results and financial condition.

***We do not own any of the subsoil accumulations of crude oil and natural gas in Brazil.***

Under Brazilian law, the Brazilian federal government owns all subsoil accumulations of crude oil and natural gas in Brazil and, according to the Brazilian regulation, the concessionaire or contracted party owns the oil and gas it produces from those subsoil accumulations pursuant to applicable agreements executed with the Brazilian federal government. We possess, as a concessionaire or contracted party of certain oil and natural gas fields in Brazil, the exclusive right to develop the volumes of crude oil and natural gas included in our reserves pursuant to concession and other agreements. Access to crude oil and natural gas reserves is essential to an oil and gas company's sustained production and generation of income, and our ability to generate income would be adversely affected if the Brazilian federal government were to restrict or prevent us from exploiting these crude oil and natural gas reserves.

***As a result of divestments and partnerships, we are exposed to risks that could lead to unforeseen financial losses.***

Upon completion of each divestment or partnership (post-closing stage), we must perform integrated management and monitoring of the actions required and provided for in the contracts related to each project, paying attention to the fulfillment of the obligations established for the buyer and the seller. In the event of non-compliance with these obligations, the financial adjustments between the parties may show results different from the ones expected at the time of divestment or partnership. In addition, as determined by the ANP in the event of total or partial sale of our participation in E&P contracts, we remain jointly liable for abandonment costs after the new concessionaire's production closes, should it default on this task. Such joint liability covers obligations arising prior to or after the transfer, provided that it arises from activities carried out on a date prior to the transfer. The same is true for any environmental liabilities.

Additionally, our sale of assets may negatively impact existing synergies or logistical issues within our company which may adversely affect our results.

In addition, our partners may not be able to meet their obligations, including financial obligations, which may jeopardize the viability of some projects in which we participate. When we act as operators, our partners may have the right to veto certain decisions, which may also affect the viability of some projects. Regardless of the partner responsible for the operations of each E&P project, we may be exposed to the risks associated with those operations, including litigation (where joint liability could apply) and the risk of government sanctions arising from such partnerships, which could have a material adverse effect on our operations, reputation, cash flow and financial condition.

***We have assets and investments in other countries in South America, where the political, economic and social situation may negatively impact our business.***

Although we have significantly reduced our participation abroad, we still operate and have businesses in several countries, particularly in South America in areas where there may be political, economic and social instabilities. In such regions, external factors may adversely affect the results and the financial condition of our subsidiaries in these countries, including: (i) the imposition of price controls; (ii) the imposition of restrictions on hydrocarbon exports; (iii) the fluctuation of local currencies against the *real*; (iv) nationalization of our oil and gas reserves and our assets; (v) increases in export tax and income tax rates for oil and oil products; and (vi) unilateral (governmental) and contractual institutional changes, including controls on investments and limitations on new projects.

If one or more of the risks described above occurs, we may lose part or all of our reserves in the affected country and may also fail to achieve our strategic objectives in these countries, or in our international operations as a whole, which may negatively impact our results and financial resources.

***The performance of companies licensed to use our brands may impact our image and reputation.***

Our divestment plan includes the partial or total sale of our companies in the fuel distribution segment and some of these businesses involve licensing agreements for our brands. Once a licensee holds the right to display our brands in products, services and communications, it can be perceived by stakeholders as our legitimate representative or spokesperson. Licensees' actions or events related to their business, such as, failures, accidents, errors in business performance, environmental crises, corruption scandals and improper use of our brand, among other factors, may negatively impact our image and reputation.

## Financial Risks

***Our cash flow and profitability are exposed to the volatility of prices of oil, gas and oil products.***

Most of our revenue derives primarily from sales of crude oil, oil products and, to a lesser extent, natural gas. International prices for oil and oil products are volatile and strongly influenced by conditions and expectations of world supply and demand. In addition, public health epidemics and pandemics (such as the Covid-19 pandemic during 2020) could affect oil prices and demand, which, consequently, may affect our financial results. Volatility and uncertainty in international oil prices are structural and likely to continue. Changes in oil prices usually result in changes in the prices of oil products and natural gas.

Currently, diesel and gasoline prices are defined taking into account the international import parity price, margins to remunerate the risks inherent in our operations and the level of market share. Price adjustments can be made at any time. Since one of our pricing objectives is to maintain fuel prices in parity with global market trends, substantial or extended declines in international crude oil prices may have a material adverse effect on our business, results and financial condition, and may also affect the value of our proved reserves. Additionally, the periodicity of the fuel readjustments, determined by us, may be revised due to exogenous factors that affect our customers, such as the transportation sector, among others and consequently, our business.

In the past, our management has adjusted our pricing of oil, gas and oil products from time to time. In the future, there may be periods during which our product prices will not be at parity with international product prices. Actions of the Brazilian government, as our controlling shareholder, could affect these pricing decisions. See “—Risks Relating to Our Relationship with the Brazilian Federal Government—The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us.” We cannot guarantee that our way of setting prices will not change in the future. As a result, when we are a net importer by volume of oil and oil products to meet Brazilian demand, increases in the price of crude oil and oil products in the international markets may have a negative impact on our costs of sales and margins, since the cost to acquire such oil and oil products may exceed the price at which we are able to sell these products in Brazil. A similar effect occurs when the real depreciates in relation to the U.S. dollar, as we sell oil and oil products in Brazil in reais and international prices for crude oil and oil products are set in U.S. dollars. A depreciation of the real increases our cost of imported oil and oil products, without a corresponding increase in our revenues unless we are able to increase the price at which we sell products in Brazil.

The Brazilian President has, at times, made statements regarding the need to modify and adjust our pricing policy for domestic conditions. In view of the statements made by the Brazilian President and the recent developments described in “Recent Developments” above, a new CEO, a new management team or Board of Directors may propose changes to our pricing policies, including a decision that such policies will not seek for alignment with international price parity. Changes to our fuel pricing policy could have a material adverse impact on our businesses, results, financial condition, and the value of our securities. See “Recent Developments” in this annual report.

***We have substantial liabilities and may be exposed to significant liquidity constraints in the near and medium term, which could materially and adversely affect our financial condition and results.***

We have incurred in a substantial amount of debt related to investments decisions taken in the past and in order to finance the capital expenditures needed to meet our long-term objectives.

Since there may be liquidity restrictions on the debt market to finance our planned investments and repay principal and interest obligations under the terms of our debt, any difficulty in raising significant amounts of debt capital in the future may impact our results and the ability to fulfill our Strategic Plan or any subsequent plan adopted.

The loss of our investment grade credit rating and any further lowering of our credit ratings could have adverse consequences on our ability to obtain financing in the market through debt or equity securities, or may impact our cost of financing, also making it more difficult or costly to refinance maturing obligations. The impact on our ability to obtain financing and the cost of financing may adversely affect our results and financial condition.

In addition, our credit rating is sensitive to any change in the credit rating of the Brazilian federal government. Any further lowering of the Brazilian sovereign's credit ratings may have additional adverse consequences on our ability to obtain financing or the cost of our financing, and consequently, on our results and financial condition.

***We are vulnerable to increased debt service resulting from depreciation of the real in relation to the U.S. dollar and increases in prevailing market interest rates.***

As of December 31, 2020, 84.9% of our financial debt was denominated in currencies other than the *real*. A substantial portion of our indebtedness is, and is expected to continue to be, denominated in or indexed to the U.S. dollar and other foreign currencies. A further depreciation of the *real* against any of these other currencies will increase our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt will increase with this depreciation.

Foreign exchange variations may have an immediate impact on our reported income. According to our cash flow hedge accounting policy, hedging relationships are designated for the existing natural hedge between our U.S. dollar denominated future exports that are considered to be highly probable (hedged item) and U.S. dollar denominated financial debt (hedging instruments).

Following a depreciation of the *real*, some of our operating expenses, capital expenditures, investments and import costs will increase. As most of our revenues are denominated in *reais* but linked to Brent prices in U.S. dollars, unless we increase the prices of our products in the local market to reflect the depreciation of the *real*, our cash generation relative to our capacity to service debt may decline.

To the extent we refinance our maturing obligations with newly contracted debt, we may incur additional interest expense.

As of December 31, 2020, 41.9% of our finance debt consisted of floating rate debt. We generally do not enter into derivative contracts or similar financial instruments or make other arrangements with third parties to hedge against the risk of an increase in interest rates.

To the extent that such floating rates rise, we may incur in additional expenses. Moreover, as we refinance our existing debt in the coming years, the mix of our indebtedness may change, specifically as it relates to the ratio of fixed to floating interest rates, the ratio of short-term to long-term debt, and the currencies in which our debt is denominated or to which it is indexed.

Changes that affect the composition of our debt and cause rises in short or long-term interest rates may increase our debt service payments, which could have an adverse effect on our results and financial condition.

***The obligations relating to our pension plan (“Petros”) and health care benefits (“AMS”) are estimates, which are reviewed annually, and may diverge from actual future contributions due to changes in market and economic conditions, as well as changes in actuarial assumptions.***

The criteria used for determining commitments relating to pension and health care plan benefits are based on actuarial and financial estimates and assumptions with respect to (i) the calculation of projected short-term and long-term cash flows and (ii) the application of internal and external regulatory rules. Therefore, there are uncertainties inherent in the use of estimates that may result in differences between the forecasted value and the actual realized value. In addition, the financial assets held by Petros to cover pension obligations are subject to risks inherent to investment management and such assets may not generate the necessary returns to cover the relevant liabilities, in which case extraordinary contributions from us, as sponsor, and the participants, may be required.

With respect to health care benefits (AMS), the projected cash flows can also be impacted by (i) higher medical costs than expected; (ii) additional claims arising from the extension of benefits; and (iii) difficulties in adjusting the contributions of participants to reflect increases in health care costs.

In addition, we and Petros face risks relating to pension funds in lawsuits that may occasionally require additional disbursements from us.

These risks may result in an increase in our liabilities and may adversely affect our results and our financial conditions.

***We are exposed to the credit risks of certain of our customers and associated risks of default. Any material nonpayment or nonperformance by some of our customers could adversely affect our cash flow, results and financial condition.***

Some of our customers may experience financial constraints or liquidity issues that could have a significant negative effect on their creditworthiness. Severe financial issues encountered by our customers could limit our ability to collect amounts owed to us, or to enforce the performance of obligations owed to us under contractual arrangements.

In addition, many of our customers finance their activities through their cash flows from operations, the incurrence of short and long-term debt.

Declining economic conditions in Brazil, and resulting decreased cash flows, combined with a lack of debt or equity financing for our customers may affect us, since many of our customers are Brazilian and may have significantly reduced liquidity and limited ability to make payments or perform their obligations.

This could result in a decrease in our cash flow and may also reduce or curtail our customers’ future demand for our products and services, which may have an adverse effect on our results and financial condition.

## Compliance, Legal and Regulatory Risks

***We may incur losses and spend time and financial resources defending pending litigations and arbitrations.***

We are currently party to numerous legal and administrative proceedings relating to civil, administrative, tax, labor, environmental and corporate claims filed against us. These claims involve substantial amounts of money and other remedies, and the aggregate cost of unfavorable decisions could have a material adverse effect on our results and financial condition.

We may be frequently affected by changes in rules and regulation.

In addition, changes in rules and regulations applicable to us may have a material adverse effect on our financial condition and results.

These legal and administrative proceedings can have a negative impact on our results due to their outcome, such as contracts' termination and/or the revision of governmental authorizations.

Depending on the outcome, litigation can result in restrictions on our operations and have a material adverse effect on some of our businesses.

***Failures to prevent, detect in a timely manner, or correct behaviors inconsistent with our ethical principles and rules of conduct may have a material adverse effect on our results and financial condition.***

We are subject to the risk that our management, employees, contractors, or any person doing business with us may engage in fraudulent activity, corruption or bribery, circumvent or override our internal controls and procedures or misappropriate or manipulate our assets for their personal benefit or of third parties, against our interest.

This risk is heightened by the fact that we have many complex, high value contracts with local and foreign suppliers, as well as the geographic distribution of our operations and the wide variety of counterparties involved in our business.

We cannot guarantee that all our employees and contractors will comply with our principles and rules of ethical behavior and professional conduct aimed at guiding our management, employees and service providers. Any failure, whether actual or perceived, to abide by our ethical principles or to comply with applicable governance or regulatory obligations could harm our reputation, limit our ability to obtain financing and have a material adverse effect on our results and financial condition, if not detected in a timely manner.

***We are subject to the risk that our internal controls may become inadequate in the future because of changes in conditions, or that our degree of compliance with our policies and procedures may deteriorate.***

Because of its inherent limitations, our internal control over financial reporting may not prevent or detect misstatements. It is also difficult to project the effectiveness of internal control over financial reporting for future periods, as our controls may become inadequate because of changes in conditions, or because our degree of compliance with our policies or procedures may deteriorate and we cannot be certain that in the future additional material weaknesses will not occur or otherwise be identified in a timely manner.

Any failure to maintain our internal control over financial reporting could adversely impact our ability to report our financial results in future periods accurately and in a timely manner, and to file required forms and documents with government authorities, including the SEC. We may also be unable to detect accounting errors in our financial reports or may even have to restate our financial results. Any of these occurrences may adversely affect our business and operation, and may generate negative market reactions, potentially affecting our financial conditions leading to a decline of our shareholder value.

***Any violation of the agreements that resolved the investigations conducted by the SEC and the DoJ and potential future investigations regarding the possibility of noncompliance with the U.S. Foreign Corrupt Practices Act could adversely affect us. Violations of this or other laws may require us to pay fines and expose us and our employees to criminal sanctions and civil suits.***

In 2018, in light of facts uncovered in connection with the Lava Jato investigation, we entered into a nonprosecution agreement (“NPA”) with the DoJ, pursuant to which we admitted that certain of our former executives and officers had engaged in conduct during the period from 2004 to 2012 that gave rise to violations of books and records and internal controls provisions under U.S. law. As part of the SEC resolution, we settled charges of violation of the United States Securities Act of 1933 and the books and records and internal control provisions of the Securities Exchange Act of 1934, without admitting the SEC allegations.

If, during the term of the NPA (three years, unless extended), the DoJ determines that we have committed a felony under U.S. federal law, provided deliberately false or misleading information, or otherwise breached the NPA, we could be subject to prosecution and additional fines or penalties, including charges under the U.S. Foreign Corrupt Practices Act (“FCPA”).

The Lava Jato investigation is still in progress by Brazilian authorities and additional relevant information affecting our interests may come to light. Adverse developments in relation to any of the above matters could negatively impact us and could divert the efforts and attention of our management team from our ordinary business operations. In connection with any further investigations or proceedings carried out by any authorities in Brazil or in any other jurisdiction, or any violation of the NPA, we may be required to pay fines or other financial relief, or consent to injunctions or orders on future conduct or suffer other penalties, any of which could have a material adverse effect on us.

***We may face additional proceedings related to the Lava Jato investigation.***

In 2018 and 2019, we paid a total of US\$2,950 million in the United States to settle a consolidated securities class action filed in connection with the Lava Jato proceedings.

We are currently party to a collective action commenced in the Netherlands, an arbitration proceeding in Argentina, and arbitration and judicial proceedings commenced in Brazil. In each case, the proceedings were brought by investors (or entities that allegedly represent investors' interests) who purchased our shares traded on the B3 Stock Exchange or other securities issued by us outside of the United States, alleging damages caused by facts uncovered in the Lava Jato investigations.

In Argentina, we are the defendant in two criminal lawsuits. The first lawsuit alleges non-compliance by us with the obligation to disclose to the Argentinian market a pending class action filed by Consumidores Financieros Asociación Civil para su Defensa before the Judicial Commercial Courts, pursuant to provisions of Argentine capital markets law. The second criminal action alleges a fraudulent offer of securities aggravated by allegedly false information included in our financial statements issued prior to 2015.

In addition, EIG Management Company, LLC ("EIG Management") and eight of EIG Management's managed funds ("EIG Funds") (together with EIG Management, "EIG") filed a complaint against us on February 23, 2016 before the United States District Court for the District of Columbia. The dispute arises out of the EIG Funds' indirect purchase of equity interests in Sete Brasil Participações S.A., and EIG currently has claims against us for fraud and aiding and abetting fraud related to the Lava Jato investigation. EIG seeks damages of at least US\$221 million.

It is possible that additional complaints or claims might be filed in the United States, Brazil, or elsewhere against us relating to the Lava Jato investigation in the future. It is also possible that further information damaging to us and our interests will come to light in the course of the ongoing investigations of corruption by Brazilian authorities. Our management may be required to direct its time and attention to defending these claims, which could prevent them from focusing on our core business.

In addition, as a result of the continuing Lava Jato investigation, substantive additional information may come to light in the future that would make the estimate that we made in 2014 for overpayments incorrectly capitalized appear, retrospectively, to have been materially low or high. In prior years, we were required to write off capitalized costs representing amounts that we overpaid for the acquisition of property, plant and equipment. We may be required to restate our financial statements to further adjust the write offs representing the overstatement of our assets recognized in our audited consolidated financial statements for prior years.

***Differing interpretations and numerous environmental, health and safety regulations and industry standards that are becoming more stringent may result in increased capital and operating expenditures and decreased production.***

Our activities are subject to evolving industry standards and best practices, and a wide variety of federal, state and local laws, regulations and permit requirements relating to the protection of human health, safety and the environment, both in Brazil and in other jurisdictions where we operate. These laws, regulations and requirements may result in significant costs, which may have a negative impact on the profitability of the projects we intend to implement or may make such projects economically unfeasible.

Any substantial increase in expenditures for compliance with environmental, health or safety regulations may have a material adverse effect on our results and financial condition. These increasingly stringent laws, regulations and requirements may result in significant decreases in our production, including unplanned shutdowns, which may also have a material adverse effect on our results and financial condition.

Moreover, we have operational units in several metropolitan regions of the country and, in some of these locations, the concentration of pollutants generated by a variable set of polluters (industries, passenger cars, trucks, etc.) may exceed the air quality standards defined by legislation. Recently, more restrictive air quality standards were defined, which may increase the demands on industrial units installed in regions that already have air quality problems. This could include obstacles to obtaining or renewing operating licenses and the need to adopt new environmental control practices such as new types of practices, increasing the frequency of monitoring emissions and installing new environmental protection equipment, generating higher costs for us. There is also a risk that the use of fuels will be subject to restrictions related to the level of pollutant emissions, which may increase the need for investments in refineries or loss of market.

In addition, changes in interpretation or differing interpretations regarding environmental, health and safety regulations, as well as our decision to settle any claims related to such regulations, could have a material adverse effect on our financial condition and results.

***Differing interpretations of tax regulations or changes in tax policies could have an adverse effect on our financial condition and results.***

We are subject to tax rules and regulation that may be interpreted differently over time, or that may be interpreted differently by us and Brazilian tax authorities (including the federal, state and municipal authorities), both of which could have a financial impact on our business. In some cases, when we have exhausted all administrative appeals relating to a tax contingency, further appeals must be made in the judicial courts, which may require that, in order to appeal, we provide collateral to judicial courts, such as the deposit of amounts equal to the potential tax liability in addition to accrued interest and penalties. In certain of these cases, settlement of the matter may be a more favorable option for us.

We may face similar situations in which our interpretation of a tax regulation may differ from that of tax authorities, or tax authorities may dispute our interpretation and we may eventually take unanticipated provisions and charges. In addition, the eventual settlement of one tax dispute may have a broader impact on other tax disputes. Any of these occurrences could have a material adverse effect on our financial condition and results.

***Differences in interpretations and new regulatory requirements by the agencies in our industry may result in our need for increased investments, expenses and operating costs, or may cause delays in production.***

Our activities are subject to regulation and supervision by regulatory agencies, such as the ANP. Issues such as local content requirements, procedures for the unification of areas, definition of reference prices for the calculation of royalties and governmental participation, among others, are subject to a regulatory regime overseen by the ANP.

Any regulatory change, as well as change or differences of interpretation between us and regulatory agencies may materially impact our results, since such newly enacted or revised pronouncements or interpretations may directly affect the economic and technical assumptions that guide our investment decisions.

***We are subject to sanctions or the granting of environmental licenses and permits, that may result in delays to deliver some of our projects and difficulties to reach our crude oil and natural gas production objectives.***

Our activities are subject to and depend on the granting of environmental licenses and permits by a wide variety of federal, state and local laws, relating to the protection of human health, safety and the environment, both in Brazil and in other jurisdictions in which we operate. As environmental, health and safety regulations become increasingly complex, it is possible that our efforts to comply with such laws and regulations will increase substantially in the future.

We cannot ensure that the planned schedules and budgets of our projects, including the decommissioning of mature fields and divestments, will not be affected by demands of new regulatory bodies or that the relevant licenses and permits will be transferred or issued in a timely manner. Potential delays in obtaining licenses may impact our crude oil and natural gas production objectives, negatively influencing our results and financial condition.

We are also subject to sanctions that may result in delays in the execution of some of our projects and difficulties in achieving our oil and natural gas production objectives, such as embargoes or partial or total interdictions.

***Operations with related parties may not be properly identified and handled.***

Transactions with related parties must follow market standards and generate mutual benefit. Decision processes surrounding such transactions must be objective and documented. Further, we must comply with the rules of competition and adequate disclosure of information, in accordance with the applicable legislation and as determined by the CVM and the SEC. The possible failure of our process to identify and deal with these situations may adversely affect our economic and financial condition, as well as lead to regulatory assessments by agencies.

***We may be required by courts to guarantee the supply of products or services to defaulted counterparties.***

As a company controlled by the federal government and operating throughout Brazil, we may be required by the Brazilian courts to provide products and services to clients, whether public or private institutions, with the purpose of guaranteeing supplies to the domestic oil and gas market, even in situations where these clients and institutions are in default with contractual or legal obligations. Such supply in exceptional situations may adversely affect our financial position.

## Government Ownership and Country Risks

***The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us.***

Our Board of Directors consists of a minimum of seven and a maximum of eleven members, who are elected at our shareholders' meeting for a term of up to two years, with a maximum of three consecutive reelections allowed. Brazilian law requires that the Brazilian federal government owns a majority of our voting stock, and so long as it does, the Brazilian federal government will have the power to elect a majority of the members of our Board of Directors and, through them, the executive officers who are responsible for our day-to-day management. As a result, we may engage in activities that give preference to the objectives of the Brazilian federal government rather than to our own economic and business objectives, which may have an adverse effect on our results and financial condition. The interests of our controlling shareholder may differ from the interests of our other shareholders, and the decisions taken by our controlling shareholder may involve different considerations, strategies and policies than they have in the past.

Presidential elections in Brazil occur every four years, and changes in elected representatives may lead to a change of the members of our Board of Directors appointed by the controlling shareholder, which may further impact the management of our business strategy, including our Strategic Plan, and guidelines, as mentioned above.

As our controlling shareholder, the Brazilian federal government has guided and may continue to guide certain macroeconomic and social policies through us, pursuant to Brazilian law. Accordingly, we may make investments, incur costs and engage in transactions with parties or on terms that may have an adverse effect on our results and financial condition.

***Fragility in the performance of the Brazilian economy, regulatory changes and investor perception of these conditions may adversely affect the results of our operations and our financial performance and may have a material adverse effect on us.***

Our activities are strongly concentrated in Brazil. Economic policies adopted by the Brazilian federal government may have important effects on Brazilian companies, including us, and on market conditions and prices of Brazilian securities. Our financial condition and results may be adversely affected by the following factors and the response of the Brazilian federal government to these factors:

- exchange rate movements and volatility;
- inflation;
- financing of government fiscal deficits;
- price instability;
- interest rates;
- liquidity of domestic capital and lending markets;
- tax policy;
- regulatory policy for the oil and gas industry, including pricing policy and local content requirements;
- allegations of corruption against political parties, elected officials or other public officials, including allegations made in relation to the Lava Jato investigation; and
- other diplomatic, social and economic developments in or affecting Brazil.

Uncertainty over whether the Brazilian federal government will implement changes in policy or regulations that may affect any of the factors mentioned above or other factors in the future may lead to economic uncertainty in Brazil and increase the volatility of the Brazilian securities market and securities issued abroad by Brazilian companies, which may have a material adverse effect on our results and financial condition.

***Instability in the Brazilian Political Environment.***

The Brazilian economy has been and continues to be affected by political events in Brazil, which have also affected the confidence of investors and the public in general, adversely affecting the performance of the Brazilian economy and resulting in heightened volatility in the Brazilian securities markets. You should make your own assessment about Brazil and prevailing conditions in the country before deciding to invest in us.

The Brazilian political environment has been considered polarized in the past few years. Brazil had not fully recovered from the impact of the 2015-2016 economic crisis when the country began feeling the effects of the Covid-19 pandemic, which severely affected the economy and increased political tensions.

The Brazilian government's policies to address economic and fiscal reforms in response to the Covid-19 pandemic remain divisive issues for Brazilian society. Any developments to the current political situation or any new relevant facts in connection with the Brazilian political situation could adversely affect Brazil's economic growth and, in turn, affect our financial condition and results of operations.

In addition, any difficulties of the Brazilian government in obtaining a majority vote in the national congress to implement reforms may result in congressional gridlock and political unrest, which could adversely affect us. Uncertainties relating to the implementation by the Brazilian government of changes to monetary, fiscal and social security policies and related legislation may contribute to economic instability and heighten market volatility and may materially and adversely affect us.

***Allegations of political corruption against members of the Brazilian government could create economic and political instability.***

In the past, members of the Brazilian federal government and the Brazilian legislative branch have faced allegations of political corruption. As a result, a number of politicians, including senior federal officials and congressmen, resigned or have been arrested.

Currently, elected officials and other public officials in Brazil are being investigated for allegations of unethical and illegal conduct identified during the Lava Jato investigation being conducted by the Office of the Brazilian Federal Prosecutor. The potential outcome of these investigations is unknown, but they have already had an adverse impact on the image and reputation of the implicated companies (including us), in addition to the adverse impact on general market perception of the Brazilian economy. These proceedings, their conclusions or further allegations of illicit conduct could have additional adverse effects on the Brazilian economy. Such allegations may lead to further instability, or new allegations against Brazilian government officials and others may arise in the future, which could have a material adverse effect on us. We cannot predict the outcome of any such allegations nor their effect on the Brazilian economy.

## Equity and Debt Securities Risks

***The size, volatility, liquidity or regulation of the Brazilian securities markets may curb the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs.***

Our shares are among the most liquid traded on the B3, but overall, the Brazilian securities markets are smaller, more volatile and less liquid than the major securities markets in the United States and other jurisdictions, and may be regulated differently from the way in which U.S. investors are accustomed. Factors that may specifically affect the Brazilian equity markets may limit the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs at the price and time they desire.

***Holders of our ADSs may be unable to exercise preemptive rights with respect to the common or preferred shares underlying the ADSs.***

Holders of ADSs who are residents of the United States may not be able to exercise the preemptive rights relating to the common or preferred shares underlying our ADSs unless a registration statement under the Securities Act is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement with respect to the common or preferred shares relating to these preemptive rights, and therefore we may not file any such registration statement. If a registration statement is not filed and an exemption from registration does not exist, JPMorgan, as depositary, will attempt to sell the preemptive rights, and holders of ADSs will be entitled to receive the proceeds of the sale. However, the preemptive rights will expire if the depositary cannot sell them. For a more complete description of preemptive rights with respect to the common or preferred shares, see “Shareholder Information – Shares and Shareholders – Shareholders’ Rights – Other Shareholders’ Rights” in this annual report.

***If holders of our ADSs exchange their ADSs for common or preferred shares, they risk losing the ability to timely remit foreign currency abroad and other related advantages.***

The Brazilian custodian for our common or preferred shares underlying our ADSs must obtain a certificate of registration from the Central Bank of Brazil to be entitled to remit U.S. dollars abroad for payments of dividends and other distributions relating to our preferred and common shares or upon the disposition of the common or preferred shares.

The conversion of ADSs directly into ownership of the underlying common or preferred shares is governed by CMN Resolution No. 4,373 and foreign investors who intend to do so are required to appoint a representative in Brazil for the purposes of CMN Resolution No. 4,373, who will be in charge for keeping and updating the investors’ certificates of registrations with the Central Bank of Brazil, which entitles registered foreign investors to buy and sell directly on the B3. Such arrangements may require additional expenses from the foreign investor. Moreover, if such representatives fail to obtain or update the relevant certificates of registration, investors may incur in additional expenses or be subject to operational delays which could affect their ability to receive dividends or distributions relating to the common or preferred shares or the return of their capital in a timely manner.

The custodian’s certificate of registration or any foreign capital registration directly obtained by such holders may be affected by future legislative or regulatory changes, and we cannot assure such holders that additional restrictions applicable to them, the disposition of the underlying common or preferred shares, or the repatriation of the proceeds from the process will not be imposed in the future.

***Holders of our ADSs may face difficulties in protecting their interests.***

Our corporate affairs are governed by our Bylaws and Law No. 6,404/76 (“Brazilian Corporate Law”), which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States or elsewhere outside Brazil. In addition, the rights of an ADS holder, which are derivative of the rights of holders of our common or preferred shares, as the case may be, to protect their interests are different under Brazilian Corporate Law than under the laws of other jurisdictions. Rules against insider trading and self-dealing and the preservation of shareholder interests may also be different in Brazil than in the United States. In addition, the structure of a class action in Brazil is different from that in the U.S. Under Brazilian law, shareholders in Brazilian companies do not have standing to bring a class action, and under our Bylaws must, generally with respect to disputes concerning rules regarding the operation of the capital markets, arbitrate any such disputes. See “Shareholder Information – Shares and Shareholders – Dispute Resolution” in this annual report.

We are a state-controlled company organized under the laws of Brazil, and all of our directors and officers reside in Brazil. Substantially all of our assets and those of our directors and officers are located in Brazil. As a result, it may not be possible for holders of ADSs to effect service of process upon us or our directors and officers within the United States or other jurisdictions outside Brazil or to enforce against us or our directors and officers’ judgments obtained in the United States or other jurisdictions outside Brazil. Because judgments of U.S. courts for civil liabilities based upon the U.S. federal securities laws may only be enforced in Brazil if certain requirements are met, holders of ADSs may face greater difficulties in protecting their interest in actions against us or our directors and officers than would shareholders of a corporation incorporated in a state or other jurisdiction of the United States.

***Holders of our ADSs do not have the same voting rights as our shareholders. In addition, holders of ADSs representing preferred shares do not have voting rights.***

Holders of our ADSs do not have the same voting rights as holders of our shares. Holders of our ADSs are entitled to the contractual rights set forth for their benefit under the deposit agreements. ADS holders exercise voting rights by providing instructions to the depository, as opposed to attending shareholders’ meetings or voting by other means available to shareholders. In practice, the ability of a holder of ADSs to instruct the depository as to voting will depend on the timing and procedures for providing instructions to the depository, either directly or through the holder’s custodian and clearing system.

In addition, a portion of our ADSs represents our preferred shares. Under Brazilian Corporate Law and our Bylaws, except for specific situations, holders of preferred shares do not have the right to vote in shareholders’ meetings. Holders of ADSs representing preferred shares are not entitled to vote most of decisions as well. See “Shareholders – Shares and Shareholders – Shareholders Rights – Shareholders’ Meetings and Voting Rights” in this annual report.

***The market for PGF's debt securities may not be liquid.***

Some of PGF's notes are not listed on any securities exchange and are not quoted through an automated quotation system. Most of PGF's notes are currently listed both on the NYSE and the Luxembourg Stock Exchange and trade on the NYSE Euronext and Euro Multilateral Trading Facility ("MTF") market, respectively, although most trading in PGF's notes occurs over-the-counter. PGF can issue new notes that can be listed in markets other than the NYSE and the Luxembourg Stock Exchange and traded in markets other than the NYSE Euronext and the Euro MTF market. We can make no assurance as to the liquidity of or trading markets for PGF's notes. We cannot guarantee that the holders of PGF's notes will be able to sell their notes in the future. If a market for PGF's notes does not develop, holders of PGF's notes may not be able to resell the notes for an extended period of time, if at all.

***We would be required to pay judgments of Brazilian courts enforcing our obligations under the guaranty relating to PGF's notes only in reais.***

If proceedings were brought in Brazil seeking to enforce our obligations in respect of the guaranty relating to PGF's notes, we would be required to discharge our obligations only in *reais*. Under Brazilian exchange controls, an obligation to pay amounts denominated in a currency other than *reais*, which is payable in Brazil pursuant to a decision of a Brazilian court, will be satisfied in *reais* at the rate of exchange in effect on the date of payment, as determined by the Central Bank of Brazil.

***A finding that we are subject to U.S. bankruptcy laws and that the guaranty executed by us was a fraudulent conveyance could result in PGF noteholders losing their legal claim against us.***

PGF's obligation to make payments on the PGF notes is supported by our obligation under the corresponding guaranty. We have been advised by our external U.S. counsel that the guaranty is valid and enforceable in accordance with the laws of the State of New York and the United States. In addition, we have been advised by our general counsel that the laws of Brazil do not prevent the guaranty from being valid, binding and enforceable against us in accordance with its terms. In the event that U.S. federal fraudulent conveyance or similar laws are applied to the guaranty, and we, at the time we entered into the relevant guaranty:

- were or are insolvent or rendered insolvent by reason of our entry into such guaranty;
- were or are engaged in business or transactions for which the assets remaining with us constituted unreasonably small capital; or
- intended to incur or incurred, or believed or believe that we would incur, debts beyond our ability to pay such debts as they mature; and

- in each case, intended to receive or received less than reasonably equivalent value or fair consideration therefor, then our obligations under the guaranty could be avoided, or claims with respect to that agreement could be subordinated to the claims of other creditors. Among other things, a legal challenge to the guaranty on fraudulent conveyance grounds may focus on the benefits, if any, realized by us as a result of the issuance of the PGF notes. To the extent that the guaranty is held to be a fraudulent conveyance or unenforceable for any other reason, the holders of the PGF notes would not have a claim against us under the relevant guaranty and would solely have a claim against PGF. We cannot ensure that, after providing for all prior claims, there will be sufficient assets to satisfy the claims of the PGF noteholders relating to any avoided portion of the guaranty.

## Corporate Risk Management

We believe that integrated and proactive risk management is essential for the delivery of results in a safe and sustainable way. Our risk-management process is centralized, allowing the standardization and uniformity of risk analysis and the management of risk responsibilities. We have an executive risk committee to advise our Board of Executive Officers in the analysis of matters relating to risk management. Each of our organizational units must identify, prioritize, monitor and, together with our business risks teams, periodically communicate to the executive risk committee the main risks involved in the activities performed by such unit, as well as planned mitigating actions.

In order to assist in this process, our corporate risk management policy establishes guidelines and responsibilities and is based on the following fundamental principles:

- respect for life and life diversity;
- full alignment and consistency with our Strategic Plan;
- ethical behavior and compliance with legal and regulatory requirements;
- integrated risk management; and
- the risk response actions consider the possible long-term cumulative consequences, the possible impacts on our stakeholders and should be oriented towards preserving or adding value and for business continuity.

The risk management organizational structure, that is under the supervision of our CFO, is responsible for:

- establishing a corporate methodology for risk management guided by an integrated and systemic view, which allows for an environment of continuous monitoring of risks in several hierarchical levels;
- disseminating knowledge and supporting the use of risk management practices in organizational units; and
- identifying, monitoring and reporting periodically to our Board of Executive Officers and Board of Directors regarding our major risks.

In order to support the risk management process, our corporate risk management policy specifies authorities to be consulted, responsibilities to be undertaken, and five principles and ten guidelines that drive our risk management initiatives.

This policy has a comprehensive approach to corporate risk management, which combines the traditional economic and financial risk management approach with other relevant areas of interest, such as protection of life, health and environment, assets and business information protection (property and security) and combating fraud and corruption (legal and compliance), among other corporate risks. With a focus on integrating risk management actions, our policy allows any employee to have access to the terms and concepts related to risk management, as well as to the measures taken and parties responsible for the management of each of the risks we are exposed to.

For further information regarding our revised business risk management policy, please visit our website at [www.petrobras.com.br/ir](http://www.petrobras.com.br/ir). The information on this website, which might be accessible through a hyperlink resulting from this URL, is not and shall not be deemed to be incorporated into this annual report.

## Disclosures about Market Risk

### Commodity Price Risk

We operate in an integrated manner throughout the various stages of the oil industry. A significant portion of our results relate directly to oil exploration and production, refining and the sale of natural gas, biofuels, and electricity in Brazil. As our purchases and sales of crude oil and oil products are linked to international commodity prices, we are exposed to their price fluctuations, which may influence our profitability, our cash flow from operations and our financial situation.

We prefer to maintain exposure to the price cycle than use financial derivatives to systematically protect purchases and sale transactions that focus on fulfilling our operation needs. However, based on crude oil market conditions and prospects of realization of our Strategic Plan, we may decide to implement protection strategies using financial instruments to manage our cash flow expenses.

In addition, we are party to derivative contracts in order to protect our margins for short-term commercial transactions carried out abroad. Our derivatives contracts provide economic hedges for oil product purchases and sales in the global markets, generally expected to occur within a 30 to 360-day period.

For more information about our commodity derivatives transactions, including a sensitivity analysis demonstrating the net change in fair value of a 25% (or 50%) adverse change in the price of the underlying commodity for options and futures, see Note 38 to our audited consolidated financial statements.

## Exposure to interest rate and exchange rate risk

*For information about interest rate and exchange rate risk, see “Operating and Financial Review and Prospects” in this annual report.*

## Insurance

Regarding operational risks, our policy is to maintain insurance coverage when the obligation to maintain such coverage derives from a legal or contractual instrument or our Bylaws; or the event covered may cause significant damage to our financial results, and coverage is economically feasible.

We maintain several insurance policies, including policies against fire, operational risk, engineering risk, property damage coverage for onshore and offshore assets such as fixed platforms, floating production systems and offshore drilling units, hull insurance for tankers and auxiliary vessels, third party liability insurance and transportation insurance. The coverages of these policies are contracted according to the objectives we define and the limitations imposed by the global insurance and reinsurance markets. Although some policies are issued in Brazil, most of our policies are reinsured abroad with reinsurers rated A- or higher by Standard & Poor’s or A3 by Moody’s and/or B ++ or higher by A.M. Best.

Our policies are subject to deductibles, limits, exclusions and limitations, and there is no assurance that such coverage will adequately protect us against liability from all possible consequences and damages associated with our activities. Thus, it is not possible to assure that insurance coverage will exist for all damages resulting from possible incidents or accidents, which may negatively affect our results.

Specifically, we do not maintain insurance coverage to safeguard our assets in case of war or sabotage. We also do not maintain coverage for business interruption, except for some specific assets in Brazil. Generally, we do not maintain coverage for our wells in operation in Brazil, except when required by a joint operating agreement. In addition, our third-party liability policies do not cover government fines or punitive damages.

Our national property damage policies have a maximum deductible of US\$180 million and their indemnity limits can reach US\$2.2 billion for refineries and US\$1.9 billion for platforms, depending on the replacement value of our assets.

Our general third-party liability policy with respect to our onshore and offshore activities in Brazil, including losses due to sudden pollution, such as oil spills, has a maximum indemnity limit of US\$250 million with an associated deductible of US\$10 million. We also maintain marine insurance with additional protection and indemnity against third parties related to our domestic offshore operations with an indemnity limit of US\$50 million up to US\$500 million, depending on the type of vessel. For activities in Brazil, in the event of an explosion or similar event on one of our non-fixed offshore platforms, these policies may provide third-party combined liability coverage of up to US\$750 million. In addition, although we do not insure most of our pipelines against property damage, we have insurance against damages or losses to third parties arising from specific incidents, such as unexpected infiltration and oil pollution.

Outside Brazil, we maintain different levels of third-party liability insurance, as a result of a variety of factors, including country risk assessments, whether we have onshore and offshore operations, or legal requirements imposed by a particular country in which we operate. We maintain separate well-control insurance policies in our international operations to cover liabilities arising from the uncontrolled eruption of oil, gas, water or drilling fluid. In addition, such policies cover claims of environmental damage caused by wellbore explosion and similar events as well as related clean-up costs with coverage limits of up to US\$198 million depending on the country.

## Emerging Risks

Emerging risks are the long-term risks that we have identified as the most severe and could significantly impact the execution of our current and subsequent strategic plans. We detail below the main emerging risks, which are also briefly described in “Risks – Risk Factors” in this annual report, either as a separate risk factor or as part of one or more risk factors.

### ***Technology systems, security (cybersecurity) systems, telecommunications systems and services.***

Recently, concerns about information security failures have been growing in the world. These failures may have an external source, such as malware, hacking, cyber terrorism, among others. These failures can also have an internal origin, through intentional and fraudulent acts by employees and contractors with the purpose of obtaining personal advantages.

The perception of the severity of this risk by our management has increased significantly over time. In addition to cybersecurity issues, the concern and actions by our management aimed to improve protection and privacy of personal data held by us. According to Law No. 13,709/2018 – Lei Geral de Proteção de Dados Pessoais (“LGPD”), we will be subject to penalties in cases of disclosure or misuse of personal information.

We are using layers of protection over e-mails, analysis of vulnerabilities in networks and applications, audit trails in information systems, privileged access control, updating security packages, authentication of devices and users for access to the internet, corporate network, internet content filters, encryption and segregation of key functions.

Additionally, in order to guarantee our security in a world where data is considered valuable we have maintained an area dedicated to information security, linked to the Digital Transformation and Innovation Executive Officer, for the purpose of centralizing management related to all security information disciplines.

The strategic initiative for digital transformation of our Strategic Plan aims to prepare for a competitive environment that is being increasingly influenced by digital technologies and a new way of working, based on collaboration. The possibilities for transforming operational and business models bring opportunities to increase the efficiency and safety of operations, reduce costs and bring more robustness and agility to decisions. Efforts go beyond the implementation of technological solutions, also seeking to implement a culture of innovation that promotes experimentation, multifunctional collaboration and information sharing.

For more details, see “Risks – Risk Factors – Digital Transformation” in this annual report.

### **Carbon Risk**

The Paris Agreement requires a profound reduction in GHG emissions and a transformation of the energy supply. Our scenarios point to an unequivocal energy transition and alterations are already being observed in the energy markets, through regulatory changes and some physical impacts of climate change on the infrastructure of companies and countries. The industry leaders have been expanding their commitments to lower carbon emissions, and the market’s increasing demand for transparency of the results related to the emissions of greenhouse gases and the impacts of the transition to low carbon emissions for the companies. The transition generates a series of additional expenses, both for controlling emissions and eventual adaptations to avoid or mitigate physical risks of the units, as well as for adapting to the business to regulatory and market changes.

The scenario predicts possible reduction in the demand for fossil fuels, carbon pricing generating higher costs, and segmentation of oils and fuels according to their carbon intensity. Greater requirements regarding the transparency of actions related to low carbon transition can also be expected, with the potential to generate image issues, loss of investors and greater difficulty in capital access.

While we work to safeguard a solid financial position in the medium and long term, we also work on our competitiveness to capture potential renewable opportunities from a long-term perspective. In this context, the Strategic Plan presents the strategies to “Undertake research aimed at operating, in the long term, in petrochemical and renewable energy businesses with a focus on wind and solar power in Brazil” and “Add value to the refining park, with more efficient processes and new BioRefining products, such as Biokerosene and Renewable Diesel Fuel, moving towards a low carbon market.”

In the short and medium term, our Strategic Plan also contains ten sustainability commitments, six of which are related to carbon with clear and well-defined metrics.

Since 2019, metrics related to carbon intensity in our refining and upstream operations have been integrated into executive remuneration. In 2020, these metrics were incorporated as a main indicator, influencing variable remuneration not only for executives, but for all company employees.

We have a greenhouse gas emission mitigation corporate program that aims to ensure compliance with disclosed commitments and is part of our US\$1 billion investment forecast for environmental commitments between 2021 and 2025. The program involves all our operational areas and includes actions related to reduce natural gas flaring, CO<sub>2</sub> reinjection, energy efficiency gains and control of operational losses.

The commitments and actions of the GHG emissions mitigation program are monitored at different levels of governance, including senior management. In 2020, we created a climate change executive management position, reinforcing our existing carbon governance, also composed of advisory committees of the Executive Board and the Board of Directors, in addition to several management level positions that evaluate carbon aspects in its activities.

In addition, we assess the physical risk associated with climate change in our operations, through research and development of climate regionalization, with renowned institutions in Brazil and abroad (Federal University of São Paulo - USP, National Institute for Space Research - INPE and National Oceanic and Atmospheric Administration - NOAA), of parameters considered potentially more susceptible to these changes, such as water availability for our refineries and thermoelectric plants and wave, wind and current patterns for our offshore platforms, generating qualified information for the process of our operations adaptation.

#### ***The Covid-19 Pandemic***

Public health epidemics and pandemics, such as the Covid-19 pandemic, can impact our workforce, our partners and our suppliers, which can affect our supply chain and the productivity of many our activities, including impact on some of our facilities, such as our platforms, refineries, terminals, among others. This may have a negative impact on our results and financial condition. A pandemic has the potential to influence our activities in many ways, which can result in operational discontinuity, increased costs, reduced revenues, compromised supply, delays in processes and projects, interruption and / or interdiction of activities. In addition, public health epidemics and pandemics may affect oil prices and demand and, consequently, our financial results. The risk of mass contagion of our own employees and contractors is being monitored by us. During the Covid-19 pandemic, we have observed:

- A reduction in demand for oil products due to the restriction in the mobility of society by lockdown measures imposed by state and municipal governments.
- A decrease in economic activity, recession, unemployment growth due to the closing of small and medium-sized companies, which may affect our supply chain.
- The postponement of return to work due to the pandemic, increase of employees' absence from work due to the growth of mental illnesses related to social isolation and social distance.
- The increase in freight prices, given the depressed oil prices, led to a shortage of ships in the market, as they were being used to store oil and byproducts.

In order to manage a situation that involves the mass contagion of our employees due to epidemics or public health pandemics, we must use mitigating actions that minimize the impact on our operations. Some of these actions are already being carried out at the time of the Covid-19 pandemic, such as the constitution of the ORS (Organizational Response Structure) for organizing actions and making decisions, adopting different work regimes for reducing exposure, defining ways operating conditions optimized for the prioritized assets and units and providing the necessary resources for operational continuity.



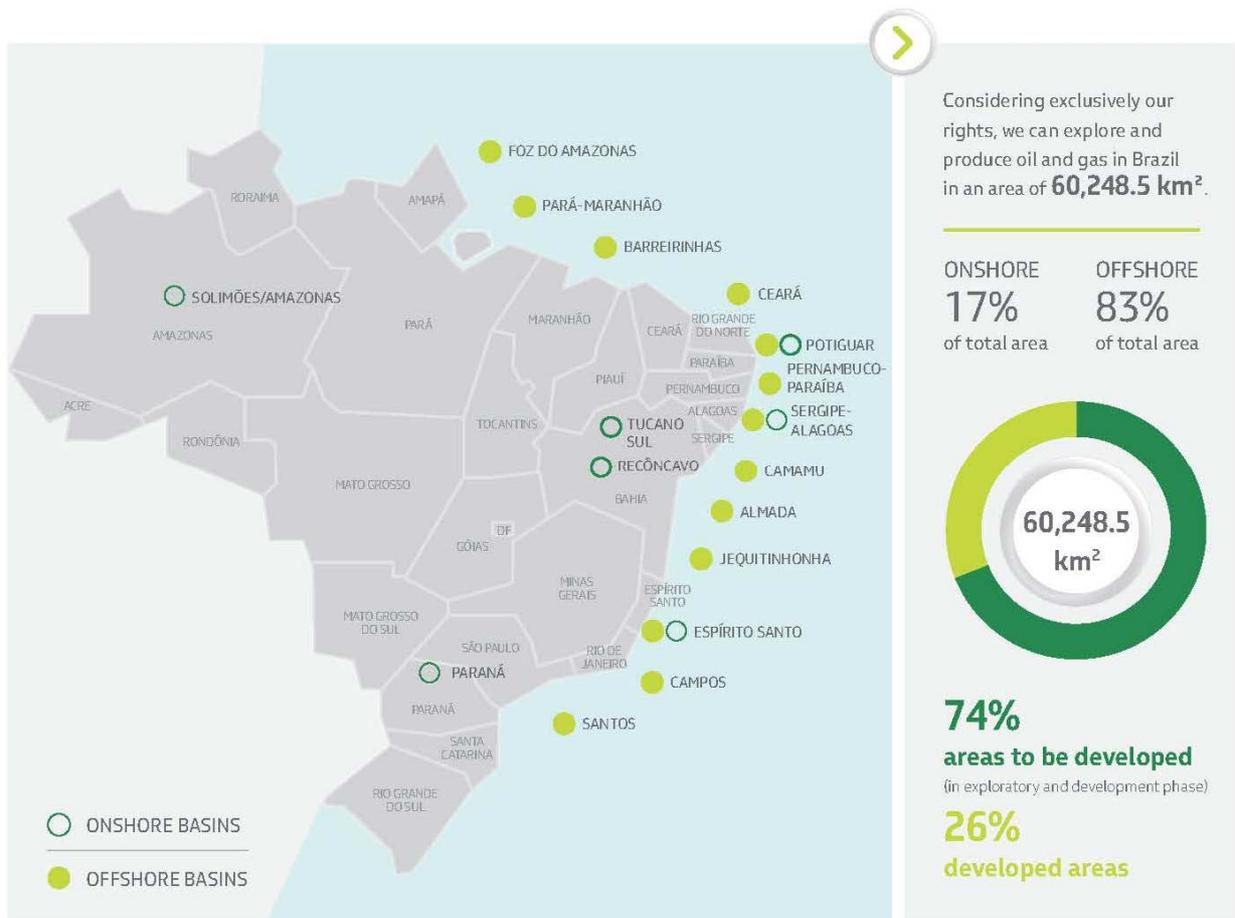
# Our Business

# Exploration and Production

## Overview

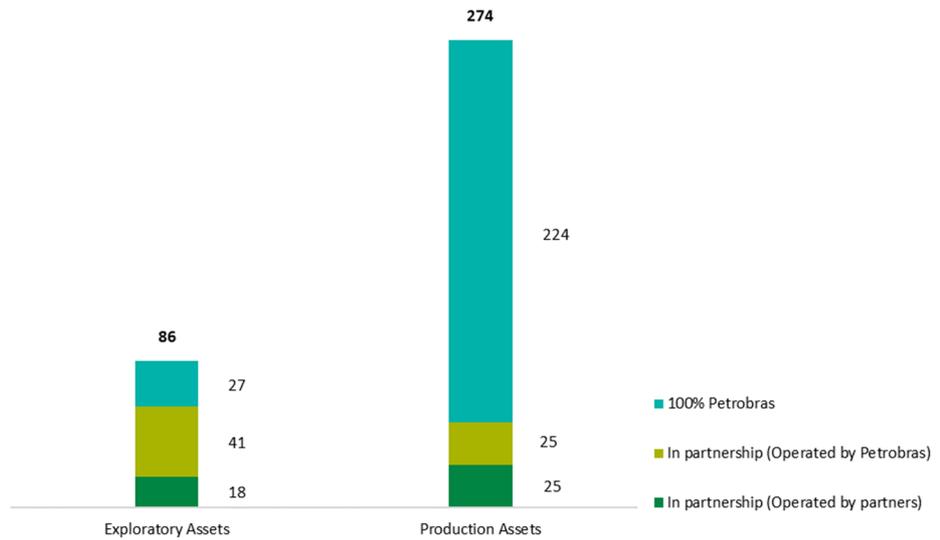
Our oil and natural gas exploration and production activities are the major components of our investment portfolio and include offshore and onshore exploration, appraisal, development, production and incorporation of oil and natural gas reserves, producing oil and natural gas in a safe and profitable way.

Our activities are focused on deepwater and ultra-deepwater oil reservoirs in Brazil, which accounted for 94% of our total production in 2020. We also have activities in mature fields in shallow waters and onshore, as well as outside Brazil as detailed below in this annual report. Brazilian exploration and production assets represent 93% of our worldwide blocks and fields, 99% of our global oil production and 99.7% of our oil and natural gas reserves.



We have 360 assets in exploration and production including 109 consortia with other oil and gas companies. From the 360 blocks and fields, 335 are under Concession Agreements, 15 are Production Sharing Agreements and 10 are regulated by Transfer of Rights Agreements.

**EXPLORATION AND PRODUCTION ASSETS (NUMBER OF ASSETS)**



Like most major oil and gas companies, we operate in partnerships using E&P consortia in the exploration of blocks and the production of oil fields in Brazil, mainly in ultra-deepwaters.

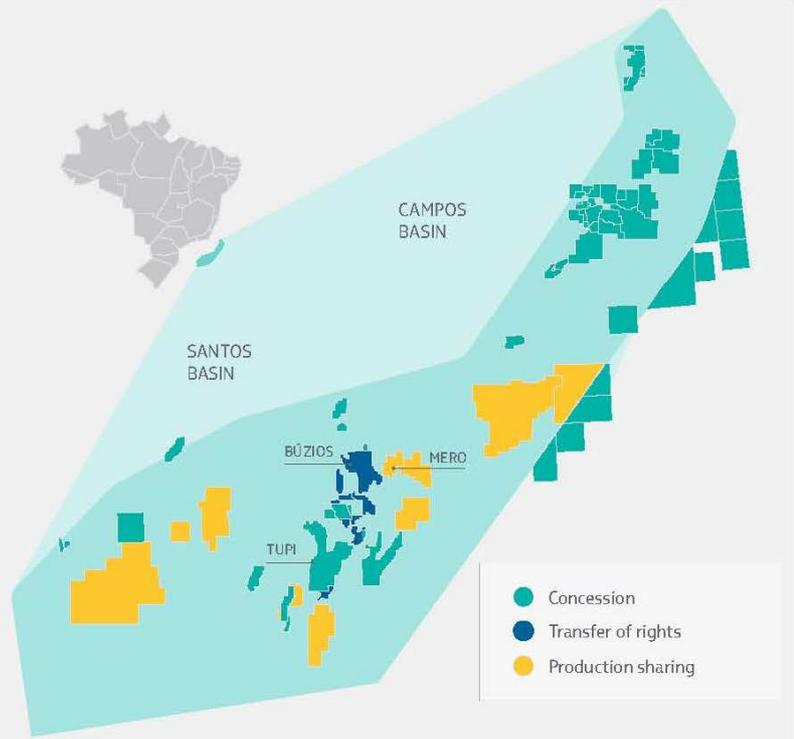
We lead and operate E&P consortia that are responsible for some major projects under development, such as Mero (Petrobras 40%, Shell 20%, Total 20%, CNODC 10% and CNOOC 10%), Berbigão, Sururu and Oeste de Atapu (all with Petrobras 42.5%, Shell 25%, Total 22.5% and Petrogal 10%).

These E&P consortia also comprise some of the biggest production fields in Brazil, such as Tupi (Petrobras 65%, Shell 25%, Petrogal 10%), Sapinhoá (Petrobras 45%, Shell 30%, Repsol Sinopec 25%), Roncador (Petrobras 75%, Equinor 25%) and Tartaruga Verde (Petrobras 50%, Petronas 50%). We also operate these fields in the Pre-salt Polygon area.



### Pre-salt Polygon

The pre-salt polygon occupies an area of 150,000 km<sup>2</sup>, of which we have exploration and production rights to 18% of the total area, or 26,500 km<sup>2</sup> (gross area). In this region, new exploratory areas can only be granted in the production-sharing regime.



### Campos Basin



100,000 km<sup>2</sup>



1971



33



Jubarte, Roncador, Marlim, Marlim Sul and Tartaruga Verde



694 mbb/d Oil Production in 2020



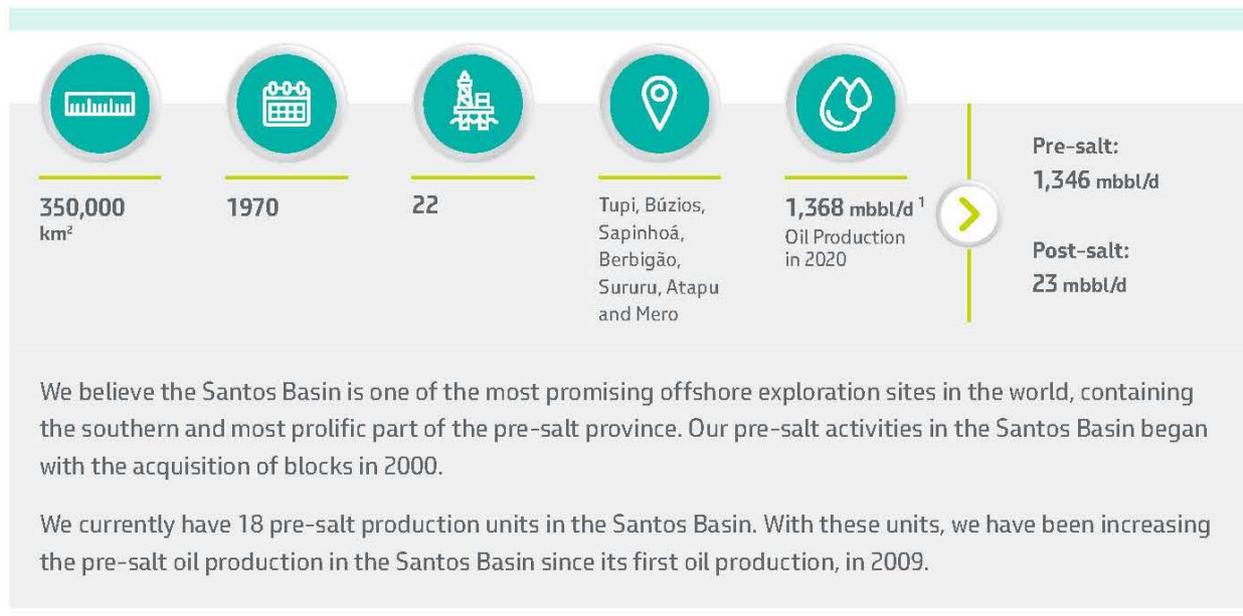
Pre-salt: 138.7 mbb/d

Post-salt: 555.3 mbb/d

The Campos Basin is one of Brazil's main and most prolific oil and gas offshore basins. Its first oil production occurred in the 1970's and although in decline, we have been able to mitigate the natural decline in mature fields of Campos Basin by drilling in-fill wells and installing new production systems.

Most of our production in the Campos Basin is from post-salt reservoirs. Pre-salt reservoirs in the Campos Basin, however, are a growing source of production. We first began pre-salt oil production in 2008 in the Jubarte field.

## Santos Basin



Total area    Start of Exploration Activities    Platforms in Production in Operated Fields (2020)    Main fields    Oil Production

1) Apparent differences in the sum of the numbers are due to rounding off.

## Other Basins

We produce oil and gas and hold exploration acreage in 17 other basins in Brazil. The most significant potential for exploratory success within our other basins are the Equatorial Margin and East Margin.

## International

Outside Brazil, we have activities in South America and North America. In West Africa we had activities until January 14, 2020. We have focused on opportunities to leverage the deepwater expertise we have developed in Brazil. However, since 2012 we have been substantially reducing our international activities through the sale of assets in accordance with our portfolio management.

### South America

We conduct exploration and production activities in Argentina, Bolivia and Colombia. In **Argentina**, through our subsidiary Petrobras Operaciones S.A., we have a 33.6% working interest in the Rio Neuquén production asset. Our unconventional gas and condensate production is concentrated in the Neuquén Basin. In 2020, our production of oil and gas in Argentina, including NGL, was 5.9 mboed.

In **Bolivia**, our gas and condensate production derives primarily from the San Alberto and San Antonio fields with 35% working interest in each of those service operation contracts, which are operated mainly to supply gas to Brazil and Bolivia. In 2020, our production of oil and gas in Bolivia, including NGL, was 28.6 mboed. The return of those contracts is a proportion of the production.

In **Colombia**, we operate and hold a 44.44% working interest in the Tayrona offshore exploration block, which includes the Orca gas discovery. We also operate and hold a 50% working interest in the Villarica Norte onshore exploration block.

#### North America and West Africa

In the United States, we focus on deepwater fields in the Gulf of Mexico, where we have non-consolidated production from the 20% participation of Petrobras America Inc. (“PAI”) in the joint venture with Murphy Exploration & Production Company (“Murphy”), the MPGOM LLC. The main contributors to the production are the Chinook, Saint Malo and Dalmatian fields. In 2020, our 20% participation represents a production of 12.1 mboed, including NGL.

In West Africa, we used to explore oil and gas opportunities exclusively through our 50% equity interest in Petrobras Oil & Gas B.V. (“PO&G”). On October 31, 2018, our subsidiary Petrobras International Braspetro BV (“PIBBV”) signed a sale and purchase agreement for the sale of its 50% equity interest in PO&G with Petrovida Holding B.V. (“Petrovida”). Petrovida is owned by Africa Oil Corp. The transaction closed on January 14, 2020.

For more information on our divestments, see “Portfolio Management” in this annual report.



### Main Assets

	2020	2019	2018
<b>Exploration and Production</b>			
Production wells (oil and natural gas) <sup>(1)</sup>	5,646	7,021 <sup>(4)</sup>	7,256
Floating rigs	20	16	16
Operated platforms in production <sup>(2)</sup>	67 <sup>(3)</sup>	107	113

(1) Includes the total amount of wells of our equity method investees (100, 164 and 163 wells in 2020, 2019 and 2018, respectively).

(2) Includes only definitive production systems, EWT and EPS units.

(3) Does not include 37 producing platforms mothballed in 2020. Excludes 26 non-producing platforms mothballed in 2020 and platforms operated by our partners.

(4) Adjusted to include wells from affiliated companies.

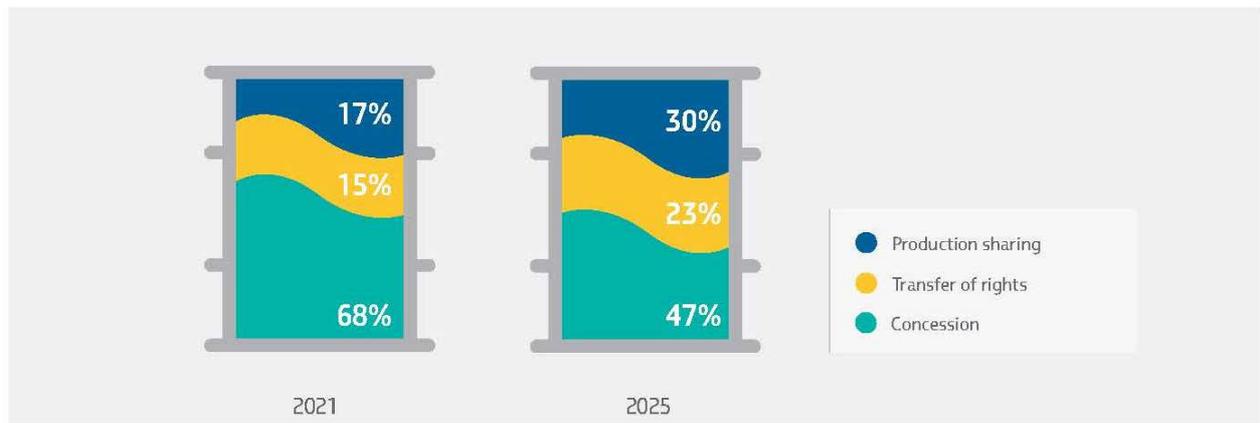
## Exploration

The oil and gas industry value chain begins in the exploratory phase, with the acquisition of exploratory blocks either through bid rounds conducted by governments or by purchases from other companies.

In Brazil, the Brazilian State owns the oil deposits, but companies and consortia are allowed to extract and explore such oil upon payment in several forms, such as royalties. Forms of payment vary depending on the applied regulatory model. Biddings rounds are the main process for the acquisition of rights over the exploratory blocks.

There are currently three regulatory models in Brazil: Concession Agreements, Transfer of Rights Agreements and Production Sharing Agreements. The concession model fully governed the oil and natural gas exploration and production until 2010, when the Brazilian federal government enacted laws establishing the Transfer of Rights Regime and the Production Sharing Regime in the Pre-salt Polygon. Currently, our main production fields follow the Concession Agreements model. However, our production fields under the Transfer of Rights Agreement and Production Sharing Agreements will represent an important part of our production in the medium and long term.

### PROJECTED PRODUCTION BY REGULATORY REGIME (2021-2025 STRATEGIC PLAN)



For information on the regulatory models applicable to our exploration and production activities, see “Legal and Tax” in this annual report.



## Bidding rounds

Over the past few years, we have participated selectively in the bidding rounds carried out by the ANP, aiming to reorganize our exploratory portfolio and maintain the relationship between our reserves and our production in order to ensure the sustainability of our future oil and gas production. Our joint operation with large oil companies in consortia is also aligned with our strategic goal to strengthen partnerships, with the intent to share risks, combine technical and technological skills and capture synergies to leverage results.

In 2018, we acquired 11 new offshore exploratory blocks, with a total area of 8,800 km<sup>2</sup>. In the Pre-salt Polygon, we acquired four areas under the production sharing regime, in partnerships with Chevron, Shell, Equinor, ExxonMobil, BP and Galp. In the Campos Basin, we acquired four blocks outside of the Pre-salt Polygon, under the concession regime, in partnerships with ExxonMobil, Qatar Petroleum and Equinor. We also acquired three blocks in the Potiguar Basin, two of them in partnership with Shell.

In 2019, we acquired two new offshore exploratory blocks, with a total area of 5,800 km<sup>2</sup>. In the Pre-salt Polygon, we acquired one area under the production sharing regime, in partnership with CNODC. In the Campos Basin, we acquired one block outside of the Pre-salt Polygon, under the concession regime, in partnership with BP. Additionally, we acquired 90% of the exploration and production rights of the surplus volume of the Búzios field during the Transfer of Rights Surplus Production Sharing Bidding Round, in a partnership with CNODC Brasil Petróleo e Gás Ltda. (5%) and CNOOC Petroleum Brasil Ltda. (5%). During the same bidding round, we also acquired 100% of the exploration and production rights of the surplus volume of the Itapu field.

In 2020, due to limitations resulting from the Covid-19 pandemic, the 17th Bidding Round was postponed. The 2nd Cycle of Open Acreage was the only bidding round of the year and took place on December 4, 2020. We did not present any offers during this bidding round.

## Exploration Activities

As of December 31, 2020, we had 86 exploratory blocks (27 with 100% working interest) that had three discoveries under evaluation. We also had three discoveries being assessed in production areas. We serve as the operator in 59 of these exploration partnership blocks.

The table below breaks down our participation in exploration activities in 2020:

### OUR PARTICIPATION IN EXPLORATION ACTIVITIES IN 2020

	Net exploratory area (km <sup>2</sup> )			Exploratory blocks (number)			Evaluation plans (number)			Wells drilled (number)		
	2020	2019	2018	2020	2019	2018	2020	2019	2018	2020	2019	2018
Brazil	42,996	40,625	51,600	82	113	133	32	24	26	9	8	8
Other S. America	5,751	6,081	6,081	4	4	4	2	1	1	0	1	0
North America	0	0	0	0	0	0	0	0	0	0	0	0
Africa	0	0	0	0	0	0	0	2	2	0	0	0
<b>TOTAL</b>	<b>48,747</b>	<b>46,706</b>	<b>57,681</b>	<b>86</b>	<b>117</b>	<b>137</b>	<b>34</b>	<b>27</b>	<b>29</b>	<b>9</b>	<b>9</b>	<b>8</b>

These investments mainly cover the costs of drilling, seismic surveys and acquisition of blocks, which contributed to the following endeavors.

In 2020, we concentrated our exploratory efforts on delimiting pre-salt reservoirs, the main oil-producing areas in Brazil. In addition to confirming the presence of oil of excellent quality in the southeastern area of the Búzios field, in the Santos Basin, a well test proved greater potential in the pre-salt area of the Albacora field, in the Campos Basin. While the former is considered a promising area for a new Floating Production Storage and Offloading (“FPSO”), the latter still has remaining untapped potential and can continue to contribute to our production.

Another well in the pre-salt area of the Uirapuru block, in the Santos Basin, also resulted in discoveries of oil and gas. There is at least one extension well planned for this prospect in the next five years. Moreover, a prospect situated in block C-M-657, in the Campos Basin, but outside of the main pre-salt cluster, was drilled this year and the results identified the presence of hydrocarbons. Additional studies are being conducted to provide better measurements and to guarantee each project’s economic viability and future resources incorporation.

We also obtained encouraging results outside the pre-salt reservoirs. In the southwestern portion of the ring fence of Tartaruga Verde, also located in the Campos Basin, an exploratory well discovered oil in carbonate reservoirs from the Albian age. We are currently evaluating the commerciality of the discovery and the possible incorporation of resources into existing infrastructure.

Finally, the turbiditic reservoirs in the Sergipe Alagoas Basin also showed promising results. After the incorporation of the results of two wells in our geological models, there was an increase in the expected volume of both Poço Verde and Moita Bonita's appraisal blocks. These results contributed to an increase in the future resources incorporation. We also conducted a long-term test in the Farfan reservoir, which resulted not only in reduced uncertainties regarding reservoir properties, but also in an increase of the expected volumes. Thus, this test confirmed the good productivity projections for this region of the deepwater complex.

In order to achieve greater return on invested capital, while always prioritizing safety, the speed at which our new projects are implemented is key. Thus, we have a strategic program (PROD1000) with the objective of reducing the implementation time of our projects, with the ambition to reach 1,000 days between field discovery and the beginning of production, compared to our current average of 3,540 days, considering large projects that use FPSO systems. Our efforts in such program are related to the integration of exploration and production development and technical data teams, the optimization of reservoir processes, the standardization of FPSO, subsea and well design, the early supplier engagement, the reduction of the construction time, and the optimization of processes using digital technologies and agile methods. As an example of our standardization efforts in the FPSO design, we applied for a patent for a Polyvalent Riser Balcony, which can be applied to different project scenarios and reduce engineering time and late changes during the FPSO construction phase.

In addition, we implemented a strategic program (EXP100) that has the ambition to increase the chance of discovering oil to 100% in exploratory wells, reducing project risks and costs by expediting production development. This program aims to better evaluate the prediction of geological properties through the use of an integrated upstream data platform and high-performance computing capacity, that enables the application of more complex algorithms in the processing of large volumes of data. Several initiatives are already underway, with notable advances in the integration of the exploratory database and in the automated interpretation of seismic and well data.

## Production

### Production Development

After a field is declared commercially viable, the process of production development begins. The investments made in this phase are mainly focused on designing and contracting production systems, which includes platforms, subsea systems, drilling, and the completion of wells.

Over the last ten years, we pursued substantial cost optimizations related to project development. Time to drill and complete wells in the Santos Basin pre-salt area decreased by 64% in 2020 when compared to 2010. In 2020, we spent an average of 117 days in the drilling and completion of a pre-salt well on the Santos Basin. This helped to significantly reduce our capital expenditures per well. Through the Well Efficiency Program (PEP70), launched in 2019, we strive to further reduce well construction costs by 30% by shortening construction time, optimizing well configurations, streamlining operations and adopting new technologies. In the post-salt, we highlight the adoption of the True One Trip - Three Phases (TOT-3P) technology, which allowed us to build a well in half the estimated time and cost and resulted in savings of US\$30 million.

We have also pursued substantial cost optimizations in wells interconnections in the Santos Basin pre-salt area, with an average cost reduction of around 6-7% per year during the past four years. Regarding the integrity of subsea systems, we have made progress in the development and application of new tools for inspection, leading to greater reliability and availability of equipment, pipelines and other components, especially those subsea components exposed to SCC-CO<sub>2</sub> events.

In 2020, we also completed the Reference Basic Design for the new generation of FPSOs for pre-salts. The design, which focuses on maximizing the economic value of production development projects, features solutions aimed at reducing implementation times, increasing system standardization, enhancing operational efficiencies and integrating new technologies and innovations to meet our low carbon commitments. This project incorporates improvements based on more than a decade of experience with the design, construction, start-up and operation of production platforms in the pre-salt layer.

In the last three years, we have installed several major systems, mainly in the pre-salt area of the Santos Basin, which helped to mitigate the Santos Basin's natural decline. In 2019, we started four new production systems: (i) the P-76 and P-77 platforms, located in the Búzios field; (ii) the P-67 platform, located in the Tupi field; and (iii) the P-68, located in the Berbigão and Sururu fields. In 2020, we started the P-70 platform, located in the Atapu field. Those five new systems connected 32 new wells (19 production wells and 13 injection wells) into our production systems. We expect to install 13 new FPSOs in the next five years.

In January 2020, the P-77 platform in the Búzios field reached its full capacity in only 10.4 months. In the Búzios field, we also achieved monthly production records of 615 kbpd of oil and 765 kboed in July, and the highest monthly production achieved by a well in Brazil, with a record of 69.6 kboed from the BUZ-10 well, registered in September. The performance of the Búzios platforms was aided by the temporary expansion of the oil and gas processing capacity of the units, using spare capacity in power generation and gas compression available until the beginning of gas exports, and by the high production potential of the wells and the reservoir.

In 2020, our producing platforms had a daily production of 2.06 million barrels of oil and 2,393 million cubic feet of natural gas (discounting the liquefied volume). As part of our response to the 2020 oil crisis, we indefinitely mothballed, and have no current plan to reenable, our 63 shallow water platforms (37 active and 26 inactive immediately prior to the mothballing). Additionally, during 2020, and due to divestment or demobilization efforts, we also discontinued eight active platforms that contributed to our annual production. These mothballed and discontinued platforms produced approximately 29 mbbbl/d in 2020. As of December 31, 2020, we own 43 and lease 16 offshore producing platforms. Besides these offshore platforms, there are three platforms on fields operated by our partners, totalling 62 active platforms.

Pre-salt and the fields under the Transfer of Rights Agreements will be particularly important to support our production growth.

In 2021, the FPSO Carioca will be installed in the S epia field. This platform has the capacity to process 180 kbpd and 211.9 mmcf/d of natural gas per day and arrived in Rio de Janeiro in February 2021 to finalize the integration and commissioning activities. In 2021, we also expect to install the FPSO Guanabara, the first definitive system in the Mero field. This FPSO has the capacity to process 180 kbpd and 423.8 mmcf/d of natural gas per day and is under construction in China.

After negotiations with our partners in the BM-S-11 Consortium, Shell Brasil Petr oleo Ltda (owning a 25% stake in the partnership) and Petrogal Brasil S.A. (owning a 10% stake in the partnership), we signed a commitment to purchase platform P-71. The unit, which is in the final phase of construction, has a production capacity of 150 kbpd and will be allocated to the Itapu field, which will allow us to begin oil production one year earlier.

With the commitment to sell P-71, subject to the above-mentioned conditions, the partners of the BM-S-11 Consortium in Brazil agreed to prepare a new development plan for the Tupi field, to be delivered to the ANP in 2021. The acquisition of P-71 and the actions to elaborate a new DP for the Tupi field are in line with our strategy of concentrating our activities on world-class assets in deep and ultra-deepwaters.

## SYSTEMS INSTALLED SINCE 2010

Start up (year)	Basin	Field/Area	Production unit	Crude oil nominal capacity (bbl/d)	Gas nominal capacity (mmcf/d)	Water depth (meters)	Fiscal regime	Main production source	Type
2020	Santos	Atapu	Petrobras 70	150,000	211.9	2,300	Transfer of Rights/Concession	Pre-Salt	FPSO
	Santos	Berbigão	Petrobras 68	150,000	211.9	2,280	Transfer of Rights/Concession	Pre-Salt	FPSO
2019	Santos	Búzios 4	Petrobras 77	150,000	211.9	1,980	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 3	Petrobras 76	150,000	211.9	2,030	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Tupi Norte	Petrobras 67	150,000	211.9	2,130	Concession	Pre-Salt	FPSO
	Campos	Tartaruga Verde	Cid. de Campos dos Goytacazes	150,000	117	765	Concession	Post-Salt	FPSO
	Santos	Tupi Ext. Sul	Petrobras 69	150,000	211.9	2,170	Transfer of Rights/Concession	Pre-Salt	FPSO
2018	Santos	Búzios 1	Petrobras 74	150,000	211.9	2,005	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 2	Petrobras 75	150,000	211.9	2,010	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
2017	Santos	Tupi Sul	Petrobras 66	150,000	211.9	2,100	Concession	Pre-Salt	FPSO
	Santos	Mero	Pioneiro de Libra	50,000	141.3	2,040	Production Sharing	Pre-Salt	FPSO
2016	Santos	Tupi Central	Cidade de Saquarema	150,000	211.9	2,100	Concession	Pre-Salt	FPSO
	Santos	Tupi Alto	Cidade de Maricá	150,000	211.9	2,100	Concession	Pre-Salt	FPSO
2015	Santos	Tupi	Cidade de Itaguaí	150,000	282.5	2,200	Concession	Pre-Salt	FPSO
	Santos	Sapinhoá	Cidade de Ilhabela	150,000	211.9	2,140	Concession	Pre-Salt	FPSO
2014	Santos	Tupi	Cidade de Mangaratiba	150,000	282.5	2,220	Concession	Pre-Salt	FPSO
	Campos	Roncador	Petrobras 62	180,000	211.9	1,600	Concession	Post-Salt	FPSO
	Campos	Jubarte	Petrobras 58	180,000	211.9	1,400	Concession	Pre-Salt	FPSO
	Campos	Roncador	Petrobras 55	180,000	141.3	1,795	Concession	Post-Salt	SS
2013	Campos	Papa-Terra	Petrobras 63	145,000	35.3	1,200	Concession	Post-Salt	FPSO
	Santos	Tupi	Cidade de Paraty	120,000	176.6	2,140	Concession	Pre-Salt	FPSO
	Santos	Sapinhoá	Cidade de São Paulo	150,000	176.6	2,140	Concession	Pre-Salt	FPSO
2012	Campos	Jubarte	Cidade de Anchieta	100,000	123.6	1,220	Concession	Pre-Salt	FPSO
2011	Campos	Marlim Sul	Petrobras 56	140,000	211.9	1,700	Concession	Post-Salt	SS
	Santos	Mexilhão	Mexilhão	20,000	529.7	170	Concession	Post-Salt	Fixed
	Campos	Jubarte	Petrobras 57	180,000	70.6	1,260	Concession	Post-Salt	FPSO
2010	Santos	Tupi	Cidade de Angra dos Reis	100,000	176.6	2,150	Concession	Pre-Salt	FPSO
	Santos	Uruguá	Cidade de Santos	25,000	353.1	1,300	Concession	Post-Salt	FPSO
	Campos	/Tambaú	Capixaba	110,000	113.0	1,300	Concession	Post-Salt	FPSO
	Campos	Jubarte	Capixaba	110,000	113.0	1,300	Concession	Post-Salt	FPSO

## MAIN SYSTEMS TO BE INSTALLED THROUGH 2025

Start up (year)	Basin	Field/Area	Production unit	Crude oil nominal capacity (bbl/d)	Gas nominal capacity (mmcf/d)	Water depth (meters)	Fiscal regime	Main production source	Type
Expected 2021	Santos	Sépia	Carioca	180,000	211.9	2,200	Transfer of Rights	Pre-Salt	FPSO
	Santos	Mero 1	Guanabara	180,000	423.8	1,930	Production Sharing	Pre-Salt	FPSO
Expected 2022	Santos	Búzios 5	Alm. Barroso	150,000	211.9	2,100	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Campos	Marlim 1	Anita Garibaldi	80,000	247.3	670	Concession	Post-Salt	FPSO
Expected 2023	Campos	Marlim 2	Anna Nery	70,000	141.3	927	Concession	Post-Salt	FPSO
	Santos	Mero 2	Sepetiba	180,000	423.8	2,000	Production Sharing	Pre-Salt	FPSO
	Santos	Itapu	Petrobras 71	150,000	211.9	2,010	Transfer of Rights/Production Sharing	Pre-Salt	FPSO
Expected 2024	Campos	Parque das Baleias	N/D	100,000	176.6	1,385	Concession	Pre-Salt	FPSO
	Santos	Búzios 6 <sup>(1)</sup>	Almirante Tamandaré	225,000	423.8	1,900	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Mero 3	Marechal Duque de Caxias	180,000	423.8	2,070	Production Sharing	Pre-Salt	FPSO
	Santos	Búzios 7 <sup>(2)</sup>	Petrobras 78	180,000	254.3	2,030	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
Expected 2025	Santos	Búzios 8	Petrobras 79	180,000	254.3	1,700	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Mero 4	N/D	180,000	423.8	1,890	Production Sharing	Pre-Salt	FPSO

(1) Regarding the production system to be installed in the Module 7 area of the Búzios field.

(2) Regarding the production system to be installed in the Module 6 area of the Búzios field.

## Decommissioning

When the output extension opportunities of an oil and gas production system are exhausted, it is necessary to carry out its decommissioning. Before that, however, we prioritize solutions for the continuity and maximization of production, including processes for assigning our rights (through divestments) of fields that no longer fit into our strategic portfolio or that have reached their economic limit.

In 2020, we made advancements in the approval of decommissioning plans and in the execution of activities relating to decommissioning.

We obtained the approvals of Brazilian regulatory bodies overseeing decommissioning plans as to: the P-07 platform, in the Bicudo field; the P-12 platform, in the Linguado field; the P-15 platform, in the Piraúna field; and the P-32 platform, in the Marlim field, all in the Campos Basin. During 2020, we sold three of those platforms (P-07, P-15 and P-12) through a public auction, one (P-12) of which was already removed from the location.

Additionally, some decommissioning processes approved before 2020 have also advanced. We started the decommissioning of the FPSO Piranema Spirit, and contracted Engineering, Preparation, Removal and Final Disposal (EPRD) services to assist with the decommissioning of the PCA-1, PCA-2 and PCA-3 platforms.

## Critical Resources in Exploration and Production

We seek to procure, develop and retain all of the critical resources that are necessary to meet our production targets. Drilling rigs and special vessels are important resources for our exploration and production operations and are centrally coordinated to assure both technical specifications and proper lead time.

Since 2008, we have grown from three rigs capable of drilling in waters with depth greater than 2,000 meters (6,560 feet) to 19 rigs with this capacity as of December 31, 2020.

We have sufficient rigs to meet our production targets, and we will continue to evaluate our drilling and special vessels demands and will adjust our fleet size as needed.

**DRILLING UNITS IN USE BY EXPLORATION AND PRODUCTION AS OF DECEMBER 31<sup>(1)</sup>**

	2020		2019		2018	
	Leased	Owned	Leased	Owned	Leased	Owned
<b>Brazil</b>	<b>20</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>17</b>	<b>4</b>
Onshore	0	0	2	0	1	3
Offshore, by water depth (WD)	20	0	16	0	16	1
Jack-up rigs	0	0	0	0	0	0
Floating rigs	20	0	16	0	16	1
500 to 999 meters WD	0	0	0	0	1	0
1000 to 1999 meters WD	1	0	1	0	2	0
2000 to 3200 meters WD	19	0	15	0	13	1
<b>Outside Brazil</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>
Onshore	0	0	1	0	1	0
Offshore	0	0	0	0	0	0
<b>Worldwide</b>	<b>20</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>18</b>	<b>4</b>

(1) In operated fields.

To achieve our production goals, we have also secured a number of specialized vessels (such as Pipe Laying Support Vessels or “PLSVs”) to connect wells to production systems. As of December 31, 2020, we had 13 PLSVs and our specialized vessels were sufficient to meet our needs.

In the subsea area, we have also been developing the HISEP™ Technology, which is a subsea separation and boosting system that will remove a significant portion of the produced gas rich in CO<sub>2</sub> from the seabed, debottlenecking the topside gas processing plants. The new technology will enable the extension of the oil production plateau, accelerating the production and boosting the economics of development projects in areas with high GOR and high CO<sub>2</sub> content. Once qualified, HISEP™ will have the potential to unlock the development of new FPSO generations suitable for areas with high GOR and high CO<sub>2</sub> content, since they will benefit from the synergy between topside and subsea processing systems capacities. This represents an opportunity to maximize oil production with controlled handled gas inventory in the surface facility, reducing CAPEX, OPEX, lead time as well as emissions, improving safety. The HISEP™ will be qualified in 2025 in the Mero Field via construction, installation and tests execution in a subsea real scale prototype that will be supported by Libra Consortium’s R,D&I levy.



## Búzios field

The Búzios field started production in April 2018 and has already produced around 100 million boe. The Búzios field is the largest discovered deepwater field in the world. It has light oil and high productivity wells.

The Búzios field is an asset with significant reserves and low lifting costs. It is economically resilient to a low oil price scenario.

In 2019, we acquired 90% of the exploration and production rights of the surplus volume of the Búzios field from the Transfer of Rights Agreement, in a partnership with CNODC Brasil Petróleo e Gás Ltda. (5%) and CNOOC Petroleum Brasil Ltda. (5%). This acquisition is consistent with the strategy of focusing our investments on world-class assets.

In March 2020, we signed the Production Sharing Contract for the Surplus of the Transfer of Rights of the Búzios Area (ToR), with CNOOC and CNODC as private partners and Pré-Sal Petróleo S.A (PPSA) as its manager. The parties have been discussing the global development strategy and other matters related to the co-participation agreement, that will regulate the coexistence of the Transfer of Rights Contract and Production Sharing Contract for the Surplus of the ToR. Pursuant to Ordinance MME 265/2019, the co-participation agreement should be signed by September 2021. Each of the private partners will have the right to increase their participating interest by 5%, if certain conditions have been met.

There are currently four units in operation in Búzios. A fifth platform, the FPSO Almirante Barroso, is under construction and expected to start production in 2022. FPSO Almirante Barroso will be the first chartered unit in the Búzios Field, capable of processing 150,000 barrels of crude oil per day.

In July 2020, we received approval for three additional operational units in Búzios. FPSO Almirante Tamandaré, a chartered unit that will become the field's sixth production system, is expected to start production in 2024. In addition, P-78 and P-79, two platforms owned by us, are expected to start production in 2025.

In 2020, with less than two years of operation, the Búzios field surpassed the 600 kbpd production mark, due to good operating results and a technical study that allowed its units to operate above the nominal capacity. In addition, three important field records were also achieved in 2020: daily field production of 674 kbbl, monthly field production of 615 kbpd in July and daily production of a single well of 65 kbbl (9-BUZ-4-RJS). Moreover, another important milestone achieved this year was the start of gas exports from the P-74 platform.

We expect better operating results for 2021 due to internal actions that have been taken to improve the production efficiency and the maintenance of the production level above the nominal capacity until the end of 2021. Finally, in 2021 we also expect to start exporting gas from other three FPSOs that are in operation.

In 2020, investments in the Búzios field totaled US\$1.7 billion. According to the Strategic Plan, US\$20.2 billion will be invested over the next five years. The average daily production from 2021 to 2025 is expected to be 639 kbbl, with Operational Expenditures around US\$5.6 billion, including leasing of vessels.

## Production

Despite the unprecedented crisis in the oil and gas sector, our operating performance has improved significantly, reaching daily, quarterly and annual oil and gas production records. In 2020, our total production of oil and gas, including NGL, was 2,836 mboed, of which 2,788 mboed were produced in Brazil and 48 mboed were produced abroad, a 2.4% increase compared to 2019. This production growth was due to higher production in the Búzios and Tupi fields.

Our 2020 operating performance was leveraged by the ramp-up of new production systems in the Búzios and Tupi fields, offsetting the negative effects derived during the Covid-19 pandemic. The oil production represented 81% of the average of 2,788 mboed oil and gas produced in Brazil.

Our production in the pre-salt layer reached 1,546 mboed in 2020, representing an increase of 21.1% in relation to our production in 2019. In 2020, the oil production in the pre-salt layer represented 68% of all oil production in Brazil, compared to 59% in 2019.

### OIL AND GAS PRODUCTION

	2020	2019	2018	2020 vs 2019
<b>Crude oil and natural gas — Brazil</b>	<b>2,788</b>	<b>2,688</b>	<b>2,527</b>	<b>3.7%</b>
Crude oil (mboed) <sup>(1)</sup>	2,266	2,172	2,035	4.3%
Onshore	105	124	135	-15.3%
Shallow Water	32	66	90	-51.5%
Post-salt deep and ultra-deepwaters	582	704	816	-17.3%
Pre-salt	1,546	1,277	994	21.1%
Natural gas (mboed)	522	516	492	1.2%
<b>Crude oil and natural gas — Abroad <sup>(2)</sup></b>	<b>48</b>	<b>82</b>	<b>101</b>	<b>-41.5%</b>
<b>TOTAL</b>	<b>2,836</b>	<b>2,770</b>	<b>2,628</b>	<b>2.4%</b>

(1) Including NGL.

(2) Includes the proportional production of our equity method investees, based on our percentage interest in these entities.

Pre-salt oil production increased 21.1%, reflecting higher production in the Búzios and Tupi fields. The pre-salt area is comprised of large accumulations of light oil, of excellent quality and with high commercial value. The post-salt oil production, in deep and ultra-deepwaters, decreased by 17.3%. This was due to natural decline in reservoirs, especially from the Campos Basin.

Shallow waters oil production decreased by 51.5%, to 32 mboed, due to hibernation of all shallow water platforms. Onshore oil production decreased by 15.3%, to 105 mboed, due to the natural decline in reservoirs.

We produced 88.40 million m<sup>3</sup>/d of gas in 2020. From that volume, we used 48.50 million m<sup>3</sup>/d in our production processes (reinjecting, flaring, consuming, liquefying) and destined 39.90 million m<sup>3</sup>/d for sale.

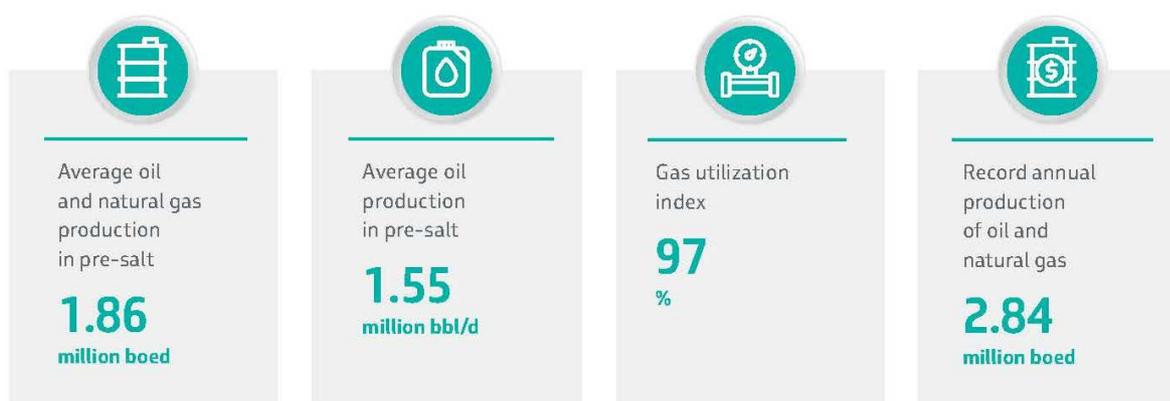
In 2020, our lifting cost, without government participation or leases, was US\$5.2 per boe, which represents a 33% decrease from the 2019 cost of US\$7.8 per boe. Including leases, our lifting cost in 2020 was US\$6.8 per boe, which represents a 29% decrease from the 2019 cost of US\$9.6 per boe.

## MAIN PRODUCTION FIELDS

Basin	Field	Main source	Production units				API gravity	Sulphur content (% wt)	2020 oil production (mmbbl/d)	
			Owned	Capacity (mmbbl/d)	Leased	Capacity (mmbbl/d)				
Santos	Tupi	Pre-salt	4	4 units with 150	6	1 unit with 100 1 unit with 120 4 units with 150	Petrobras (65%), Shell (25%), Petrogal (10%)	28 – 32	0.29 – 0.38	619.8
Santos	Búzios	Pre-salt	4	4 units with 150	—	—	Petrobras (100%)(1)	28- 29	0.31- 0.32	516.8
Santos	Sapinhoá	Pre-salt	—	—	2	2 units with 150	Petrobras (45%), Shell (30%), Repsol Sinopec (25%)	29.8	0.4	92.6
Campos	Jubarte	Pre-salt	2	2 units with 180	2	1 unit with 100 1 unit with 110	Petrobras (100%)	17 – 30	0.29 – 0.56	185.5
Campos	Roncador	Post-salt	4	3 units with 180 1 unit with 190	—	—	Petrobras (75%), Equinor (25%)	17 – 28	0.53 – 0.74	112.0
Campos	Marlim Sul	Post-salt	3	1 unit with 140 1 unit with 180 1 unit with 200	—	—	Petrobras (100%)	17 – 25	0.59 – 0.73	109.9
Campos	Tartaruga Verde	Post-salt	—	—	1	1 unit with 150	Petrobras (50%) Petronas (50%) <sup>2</sup>	27.5	0.76	45.5
Campos	Marlim	Post-salt	7	1 unit with 50 1 unit with 75 4 units with 100 1 unit with 180	—	—	Petrobras (100%)	19 – 23	0.68 – 0.77	61.3
Campos	Marlim Leste	Post-salt	1	1 unit with 180	1	1 unit with 100	Petrobras (100%)	23 – 29	0.50 – 0.51	41.4
Other pre and post-salt fields									344.2	
Onshore									104.9	
Shallow waters									31.9	
<b>TOTAL</b>									<b>2.265.8</b>	

(1) Including operations in 2020.

## PRODUCTION 2020





## Tupi Field

In July 2020, we reached the accumulated production of two billion barrels of oil equivalent (boe) in the Tupi field, located in the pre-salt of the Santos Basin, approximately 230 km from the coast of the state of Rio de Janeiro. This milestone took place in the same month in which we celebrated the 20th anniversary of the signing of the concession agreement for block BM-S-11, where the field is located currently producing approximately one million barrels per day (bpd).

This accumulated production occurred just 10 years after the start of the first permanent production system, the FPSO Cidade Angra dos Reis, and 14 years after it was discovered, in 2006. From 2010 to 2019, the consortium, formed by us, with a 65% stake in the partnership with Shell Brasil Petróleo Ltda (25% stake in the partnership) and Petrogal Brasil S.A. (10% stake in the partnership), put into operation nine production systems, an average of one system per year.

In the process of implementing these production systems, we had to overcome a series of unprecedented challenges in the industry, such as the distance from the coast and the existence of very few similar reservoirs in the world, ultra-deep reservoirs under a thick layer of salt. In partnership with research institutions, partner companies and suppliers, we developed a series of technologies and innovations that allowed safe and profitable productions in pre-salt fields, which continues to be a reference in terms of its environmental performance. As a result of the unprecedented technologies we developed, in 2015 we received the Distinguished Achievement Award for Companies, Organizations and Institutions, which is the main award in the industry and is promoted by the Offshore Technology Conference (OTC).

### The Future of Tupi

Together with our partners in the BM-S-11 block, we have developed several initiatives aimed at revitalizing the field even before the start of its decline, seeking to increase the oil and gas recovery factor that can be extracted from the field and, thus, maximize the value of the asset. Working towards this goal, we are developing projects to maintain the reservoir's pressure, such as interconnecting new wells into already implemented production systems and alternating water and gas injection technology (Water Alternating Gas - WAG). In addition to these projects, together with our partners we are also analyzing actions that will be taken according to the terms of the concession and seeking to develop other low-cost and highly reliable technologies that may increase the recovery factor.

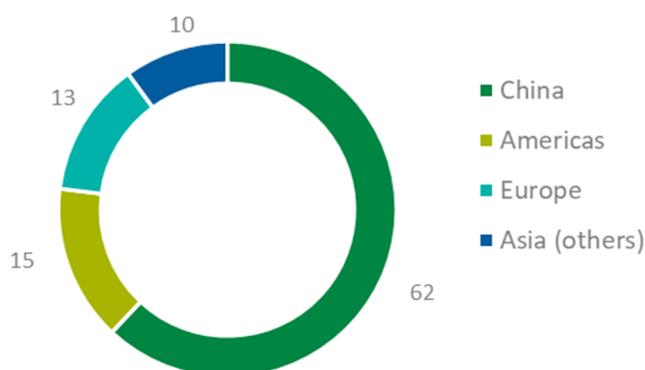
We also carry out limited oil shale mining operations in São Mateus do Sul, in the Paraná Basin of Brazil, and convert the kerogen (solid organic matter) from these deposits into synthetic oil and gas. This operation is conducted in an integrated facility and its final products are fuel gas, liquefied petroleum gas ("LPG"), shale naphtha and shale fuel oil. Our business units in Brazil do not utilize the fracking method or the hydraulic fracturing method for oil production, since they are not appropriate in the context of our operations. Also, we do not inject any water or chemicals in the soil in connection with our open pit oil shale mining operations. Our process consists of crushing, screening and subsequently heating all the shale at high temperatures (pyrolysis) and we have in place a proper segregation process for the by-products derived from such process.

For more information on our production of crude oil, natural gas, synthetic oil and synthetic gas by geographic area in 2020, 2019 and 2018, see Exhibit 15.3 to this annual report.

## Customers and Competitors

Crude oil is primarily sold through long-term contracts and also in the spot market. Our overseas portfolio includes approximately 60 clients, such as refiners that process or have processed Brazilian oils regularly, distributed throughout China, Americas, Europe, and other countries in Asia.

### OIL CLIENTS (% VOL)



Fuel oil is one of the most representative types of oil products in terms of volume in exports. In 2020, we exported high sulfur oil and, to a greater degree, low sulfur fuel oil to several destinations. Our fuel oil is available in the major hubs in the market such as Singapore, the Mediterranean, the US Gulf Coast, the west coast of Africa, Panama and the Caribbean. Our counterparties list consists of major companies, trading companies and barging companies. We have sold fuel oil to more than 40 different companies this year.

In the exploration and production industry, we deal with several competitors when we participate in bidding rounds conducted by the ANP.

## Reserves



### Preparation of reserves estimates

We apply SEC rules (Rule 4-10(a) of Regulation S-X) for estimating and disclosing oil and natural gas reserve quantities included in this annual report. In accordance with those rules, we estimate reserves by considering average prices calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, except for the reserves of the Amazon fields for which volumes are estimated using gas prices as set forth in our contractual arrangements for gas sales. In 2020, we did not book proved reserves relating to non-traditional reserves such as synthetic oil and gas.

We estimate reserves based on forecasts of field production, which depends on an array of technical information, such as seismic surveys, well logs and tests, rock and fluid samples, and geoscience, engineering and economic data. All reserve estimates involve some degree of uncertainty. The uncertainty depends primarily on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of that data. Our estimates are thus made using the most reliable data and technology at the time of the estimate, in accordance with the best practices in the oil and gas industry and SEC rules and regulations.

Thus, the reserve estimation process begins with an initial evaluation of our assets by geophysicists, geologists and engineers. Reserves coordinators in each business unit in Brazil and the corporate reserves team provide guidance for reserves estimates in compliance with SEC requirements to the asset teams. General managers in our business units in Brazil and executive officers of companies outside Brazil where we have interests are responsible for regional reserves estimates in compliance with SEC requirements. The corporate reserves team is responsible for consolidating our reserves estimates, standardized measures of discounted net cash flows related to proved oil and gas reserves and other information related to proved oil and gas reserves. Our reserves estimates are approved by our Board of Executive Officers, which then informs our Board of Directors about the approval. The technical person primarily responsible for overseeing the preparation of our reserves is the manager of the corporate reserves team, who has a degree in engineering and 18 years of experience in the oil and gas industry.

DeGolyer and MacNaughton (“D&M”) conducted a reserves evaluation of 97% of our net proved crude oil, condensate and natural gas reserves as of December 31, 2020 in Brazil. The amount of reserves reviewed by D&M corresponds to 97% of our total proved reserves company-wide on a net equivalent barrel basis. For disclosure describing the qualification of D&M’s technical person primarily responsible for overseeing our reserves evaluation, see Exhibit 99.1 to this annual report.

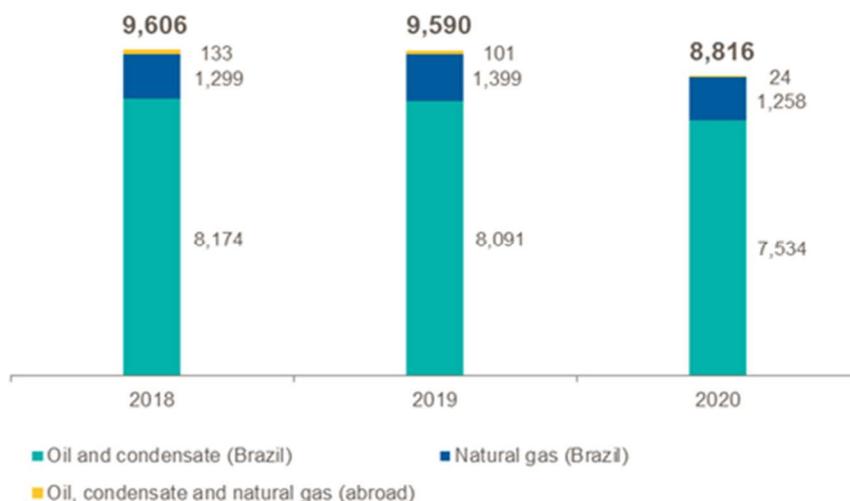
For a description of the risks relating to our reserves and our reserve estimates, see “Risks” in this annual report.

We discover new areas through exploratory activity. Such areas constitute our fields after the declaration of commerciality. We then prepare a development plan for each field. As projects achieve adequate maturity, proved reserves may be reported.

Our fields’ proved reserves can be later increased with additional drilling, operational optimizations and improved recovery methods, such as water injection, among other activities.

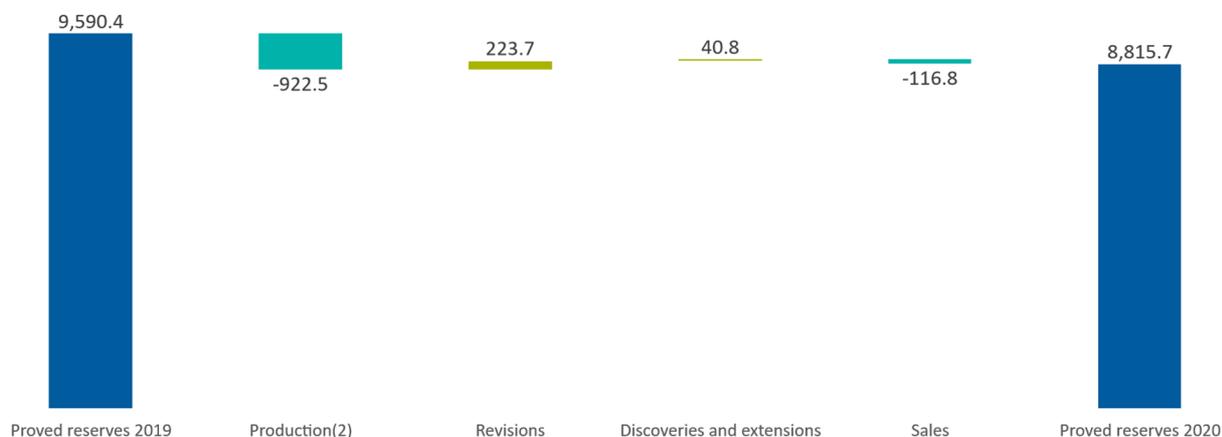
Our net proved oil, condensate and natural gas reserves as of December 31, 2020 were estimated at 8,816 million boe. This estimate includes our interest in our equity method investees, which represents 0.2% of our net reserves.

**PROVED RESERVES<sup>(1)</sup>** (MILLION BOE)



(1) Apparent differences in the sum of the numbers are due to rounding off.

Oil and gas reserves volumes change yearly. Quantities included in our previous year’s reserves that are produced during the year are no longer reserves at year-end. Other factors, such as reservoir performance, revisions in oil prices, discoveries, extensions, purchases and sales of assets that occurred during the year, also influence year-end reserves quantities.

**PROVED RESERVES<sup>(1)</sup>** (MILLION BOE)

(1) Apparent differences in the sum of the numbers are due to rounding off.

(2) The 922.5 million boe production volume is the net volume withdrawn from our proved reserves. It therefore excludes NGL, as we estimate our oil and gas reserves at a reference point located prior to the gas processing plants, except for the United States of America and Argentina. The production does not consider injected gas volumes, production of EWTs in exploratory blocks and production in Bolivia, since Bolivian reserves are not included in our reserves due to restrictions determined by Bolivian Constitution.

In 2020, we incorporated 223.7 million boe of proved reserves by revising previous estimates, including:

- addition of 637.1 million boe arising from technical revisions, mainly due to good performance and increased production experience in reservoirs in the pre-salt layer of Santos Basin;
- addition of 253.9 million boe due to approvals of new projects, mainly in the Santos and Campos Basins; and
- reduction of 667.2 million boe related to economic revisions, mainly due to the decrease in oil prices.

In addition, we added 40.8 million boe to our proved reserves due to extensions and discoveries in the pre-salt of Santos Basin, and reduced 116.8 million boe due to sales of proved reserves.

## RESERVES INDEXES 2020

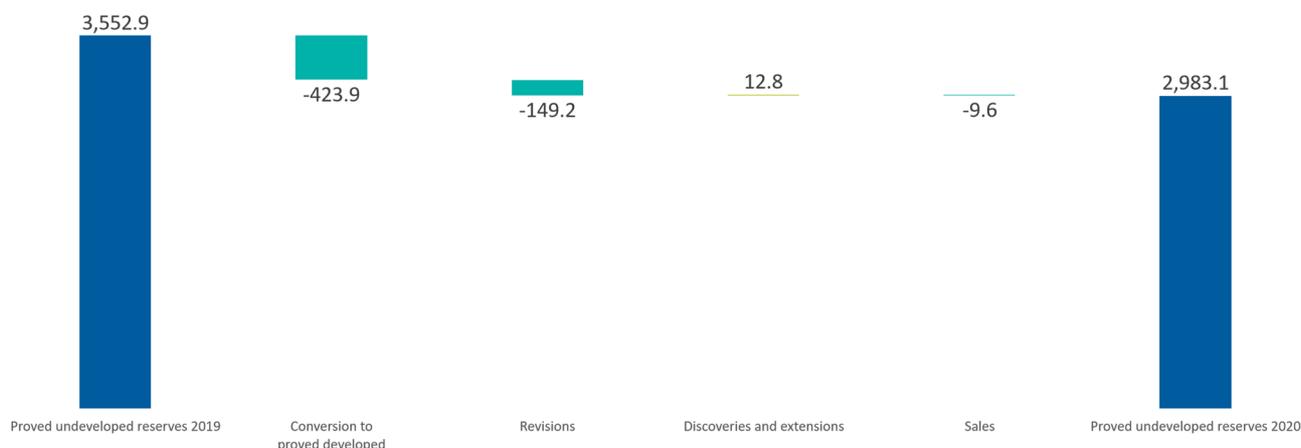


## Proved Undeveloped Reserves

As of December 31, 2020, our proved undeveloped reserves were estimated at 2,983.1 million boe, a net decrease of 16% when compared to 2019 year-end. This decrease is a result of the following changes:

- we converted a total of 423.9 million boe of proved undeveloped reserves to proved developed reserves, mainly as a result of the P-70 platform start-up in the Santos Basin and offshore and onshore drilling and tieback operations;
- our proved undeveloped reserves decreased by 149.2 million boe as a result of revisions to previous estimates, including a 456.3 million boe reduction due to economic revisions, partially offset by additions from new project approvals, mainly in the Santos and Campos Basins (247.2 million boe), and technical revisions, mainly due to good performance and increased production experience in the pre-salt layer of the Santos Basin (60.0 million boe);
- we added 12.8 million boe to our proved undeveloped reserves due to extensions and discoveries in the pre-salt of the Santos Basin; and
- we reduced 9.6 million boe from our proved undeveloped reserves as a result of sales of proved reserves.

**CHANGES IN PROVED UNDEVELOPED RESERVES<sup>(1)</sup>** (MILLION BOE)



(1) Apparent differences in the sum of the numbers are due to rounding off.

As of December 31, 2020, 55% (1,647 million boe) of our proved undeveloped reserves have remained undeveloped for five years or more, mainly due to the inherent complexity of ultra-deepwater development projects in giant fields, particularly in the Santos and Campos Basins, in which we are investing in the required infrastructure.

In 2020, we invested a total of US\$5.7 billion in development projects, of which 99% was invested in Brazil.

Most of our investments relate to long-term development projects, which are developed in phases due to the large volumes and extensions involved, the deep and ultra-deepwater infrastructure and the production resources complexity. In these cases, the full development of the reserves related to these investments may exceed five years.

For further information on our reserves, see the unaudited section “Supplementary Information on Oil and Gas Exploration and Production” in our audited consolidated financial statements.

### Oil and Gas Additional Information

The following tables show (i) the number of gross and net productive oil and natural gas wells and (ii) total gross and net developed and undeveloped oil and natural gas acreage in which we had working interests as of December 31, 2020. A gross well or acre is a well or acre where we own a working interest, while the number of net wells or acres is the sum of fractional working interests in gross wells or acres. We do not have any material acreage expiring before 2025.

## GROSS AND NET PRODUCTIVE WELLS

	As of December 31, 2020							
	Oil		Natural Gas		Synthetic Oil		Synthetic gas	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Consolidated subsidiaries</b>								
Brazil	5,187	5,155	316	310	0	0	0	0
<b>International</b>								
South America (outside of Brazil)	46	20	191	94	0	0	0	0
<b>Total international</b>	<b>46</b>	<b>20</b>	<b>191</b>	<b>94</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total consolidated</b>	<b>5,233</b>	<b>5,176</b>	<b>507</b>	<b>404</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Equity method investees</b>								
South America (outside of Brazil)	0	0	0	0	0	0	0	0
North America	38	3	1	0.1	0	0	0	0
Africa	0	0	0	0	0	0	0	0
<b>TOTAL GROSS AND NET PRODUCTIVE WELLS</b>	<b>5,271</b>	<b>5,179</b>	<b>508</b>	<b>404</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## GROSS AND NET DEVELOPED AND UNDEVELOPED ACREAGE (IN ACRES)

	As of December 31, 2020			
	Developed acreage		Undeveloped acreage	
	Gross	Net	Gross	Net
<b>Consolidated</b>				
Brazil	4,374,882.4	3,847,297.5	468,233.6	415,649.9
South America (outside of Brazil)	2,304.0	774.1	2,310.0	776.2
<b>Total consolidated</b>	<b>4,377,186.4</b>	<b>3,848,071.6</b>	<b>470,543.6</b>	<b>416,426.1</b>
<b>Equity method investees</b>				
Africa	0	0	0	0
North America	22,897.0	1,985.2	146,177.0	10,832.1
<b>Total equity method investees</b>	<b>22,897.0</b>	<b>1,985.2</b>	<b>146,177.0</b>	<b>10,832.1</b>
<b>TOTAL GROSS AND NET ACREAGE</b>	<b>4,400,083.4</b>	<b>3,850,056.8</b>	<b>616,720.6</b>	<b>427,258.2</b>

For “net” figures, we used our working interest held on December 31, 2020. The division in oil and gas in the acreage table was not included because, usually, oil and gas are produced from the same acreage. Gross and net developed and undeveloped acreage presented in this table does not include exploratory areas.

The following table sets forth the number of net productive and dry exploratory and development wells drilled in the last three years.

## NET PRODUCTIVE AND DRY EXPLORATORY AND DEVELOPMENT WELLS

	2020	2019 <sup>(1)</sup>	2018
<b>Net productive exploratory wells drilled</b>			
<b>Consolidated subsidiaries</b>			
Brazil	4.6	5.5	4.0
South America (outside of Brazil)	—	1.0	—
Total consolidated subsidiaries	4.6	6.5	4.0
<b>Equity method investees</b>			
North America <sup>(2)</sup>	—	—	—
Africa	—	—	—
<b>Total productive exploratory wells drilled</b>	<b>4.6</b>	<b>6.5</b>	<b>4.0</b>
<b>Net dry exploratory wells drilled</b>			
<b>Consolidated subsidiaries</b>			
Brazil	1.5	1.0	4.0
South America (outside of Brazil)	—	—	—
Total consolidated subsidiaries	1.5	1.0	4.0
<b>Equity method investees</b>			
North America <sup>(2)</sup>	—	—	—
Africa	—	—	—
<b>Total dry exploratory wells drilled</b>	<b>1.5</b>	<b>1.0</b>	<b>4.0</b>
<b>Total number of net exploratory wells drilled</b>	<b>6.1</b>	<b>7.5</b>	<b>8.0</b>
<b>Net productive development wells drilled</b>			
<b>Consolidated subsidiaries</b>			
Brazil	79.0	102.0	103.7
South America (outside of Brazil)	0.336	—	3.7
Total consolidated subsidiaries	79.3	102.0	107.4
<b>Equity method investees</b>			
North America <sup>(2)</sup>	0.306	0.14	0.1
Africa	0	0.6	0.4
<b>Total productive development wells drilled</b>	<b>79.6</b>	<b>102.7</b>	<b>107.9</b>
<b>Net dry development wells drilled</b>			
<b>Consolidated subsidiaries</b>			
Brazil	—	—	—
South America (outside of Brazil)	—	—	—
Total consolidated subsidiaries	—	—	—
<b>Equity method investees</b>			
North America <sup>(2)</sup>	—	—	—
Africa	—	—	—
<b>Total dry development wells drilled</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>TOTAL NUMBER OF NET DEVELOPMENT WELLS DRILLED</b>	<b>79.64</b>	<b>102.7</b>	<b>107.9</b>

(1) Data from 2019 has been adjusted to reflect the inclusion of both injection and producing wells.

(2) Due to the joint venture formed by PAI and Murphy, information regarding proved reserves, acreage and wells in the United States are reported in the "equity method investees" section. For "net" figures, we used the working interest held as of December 31, 2020.

The following table summarizes the number of wells in the process of being drilled as of December 31, 2020.

#### NUMBER OF WELLS BEING DRILLED AS OF DECEMBER 31, 2020

	Gross	Net
<b>Consolidated Subsidiaries</b>		
Brazil	8.0	6.65
<b>International</b>		
South America (outside of Brazil)	1.0	0.34
North America	4.0	0.18
<b>TOTAL WELLS DRILLING</b>	<b>13.0</b>	<b>7.17</b>

The following table sets forth our average sales prices and average production costs by geographic area and by product type for the last three years.

#### AVERAGE SALES PRICES AND AVERAGE PRODUCTION COSTS (US\$)

	Brazil	South America	North America	Total	Equity method investees <sup>(2)</sup>
<b>2020</b>					
<b>Average sales prices</b>					
Oil and NGL, per barrel	39.96	36.89	—	39.95	37.69
Natural gas, per thousand cubic feet <sup>(1)</sup>	5.63	3.65	—	5.47	2.00
Synthetic oil, per barrel	33.2	—	—	33.2	—
Synthetic gas, per thousand cubic feet	2.52	—	—	2.52	—
<b>Average production costs, per barrel – total</b>	<b>4.11</b>	<b>4.35</b>	<b>—</b>	<b>4.11</b>	<b>36.23</b>
<b>2019</b>					
<b>Average sales prices</b>					
Oil and NGL, per barrel	61.25	36.89	—	61.25	64.71
Natural gas, per thousand cubic feet <sup>(1)</sup>	7.72	3.65	—	7.55	2.60
Synthetic oil, per barrel	50.55	—	—	50.55	—
Synthetic gas, per thousand cubic feet	3.53	—	—	3.53	—
<b>Average production costs, per barrel – total</b>	<b>7.05</b>	<b>4.69</b>	<b>—</b>	<b>7.02</b>	<b>31.20</b>
<b>2018</b>					
<b>Average sales prices</b>					
Oil and NGL, per barrel	66.66	42.44	67.21	66.65	72.76
Oil and NGL, per barrel	7.15	4.09	3.56	7.00	0.76
Natural gas, per thousand cubic feet <sup>(1)</sup>	60.04	—	—	60.04	—
Synthetic oil, per barrel	4.47	—	—	4.47	—
Synthetic gas, per thousand cubic feet	10.21	4.57	9.75	10.11	31.85
<b>Average production costs, per barrel – total</b>	<b>10.21</b>	<b>4.57</b>	<b>9.75</b>	<b>10.11</b>	<b>31.85</b>

(1) The volumes of natural gas used in the calculation of this table are the production volumes of natural gas available for sale and are also shown in the production table above. Natural gas amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.

(2) Operations in Venezuela until 2016, in Africa until October 2018, and in the United States from December 2018, following the creation of a joint venture with Murphy, in which our wholly-owned subsidiary PAI has a 20% stake.

For more information about our capitalized exploration costs, see Note 28 to our audited consolidated financial statements and the unaudited supplementary information on oil and gas exploration and production contained therein.

# Refining, Transportation and Marketing

We processed 73% of all our oil production, which includes oil and LNG and excludes natural gasoline (“C5+”), in our refineries. The remainder was exported. In 2020, we produced 1.828 million bbl/d of oil products, from the processing of Brazilian oil (94% of feedstock) and imported oil (6% of feedstock). We traded these oil products both in Brazil and abroad.

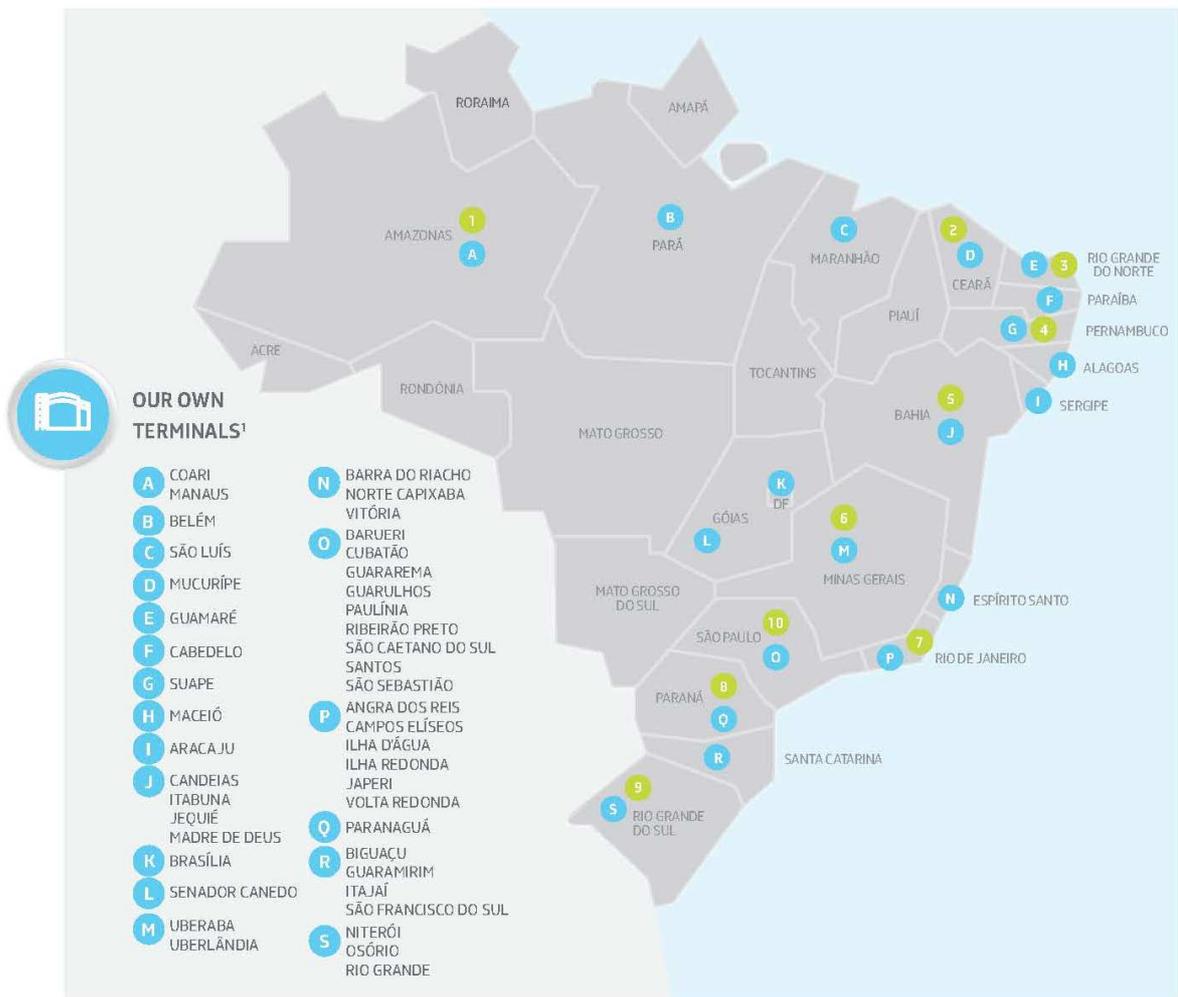
Furthermore, we operate in the petrochemical sector with interests in companies, as well as in the production of biofuels through our wholly-owned subsidiary, Petrobras Biocombustível S.A. (“PBIO”).

## Overview

We own and operate 13 refineries in Brazil, with a total net crude distillation capacity of 2,176 mbbbl/d. This represents 99% of all refining capacity in Brazil, according to the 2020 statistical yearbook published by the ANP.

Most of our refineries are located near our crude oil pipelines, storage facilities, refined product pipelines and major petrochemical facilities, easing access to crude oil supplies and end-users.

We also operate a large and complex infrastructure of pipelines and terminals, and a shipping fleet to transport oil products and crude oil to Brazilian and global markets. We operate 44 of our own terminals through our wholly-owned subsidiary Petrobras Transporte S.A. (“Transpetro”), and we have contracts for the use of some of the storage capacity of 17 third-party terminals.



Start Operation   Crude Distillation Capacity   API Gravity

1) Operated by Transpetro, a 100% Petrobras subsidiary  
2) Guamaré Industrial Asset (former Potiguar Clara Camarão Refinery)

Our Refining, Transportation and Marketing also include activities such as (i) petrochemicals (ii) extraction and processing of shale and (iii) production of biofuels.

We are repositioning ourselves in the refining business through divestment, a strategy which allows us to share risks and to establish a dynamic, competitive and efficient industry, while generating liquidity for us.

In line with our repositioning process, in June 2019, we signed a commitment with CADE which consolidates our understanding on the execution of divestment of refining assets in Brazil. The purpose of the agreement is to provide competitive conditions, encouraging new economic agents to enter the downstream market, as well as suspending CADE's court administrative investigation related to the alleged abuse of our dominant position in the refining segment. The agreement considers the divestment of approximately 50% of our refining capacity, which comprises seven refining units (Reman, Lubnor, Rnest, Rlam, Regap, Repar and Refap) and a shale industrialization unit (SIX).

For more information on our agreement with CADE regarding our divestments in refining assets, see "Risks – Risk Factors – Operational Risks" and "Portfolio Management" in this annual report.

The initial stages of these divestments processes were announced in 2019. We have since announced additional stages in 2020.

For more information on our partnerships and divestments, see "Portfolio Management" in this annual report.



## Main Assets

	2020	2019	2018
<b>Transport and storage</b>			
Pipelines (km)	7,719	7,719	7,719
Vessel fleet (owned and chartered)	131	128	123
Own	30	45	43
Chartered	101	83	80
Terminals	61	63	56
Own	44	44	44
Third party's <sup>(1)</sup>	17	19	9
<b>Refining</b>			
Refineries	13	13	14
Brazil	13	13	13
Abroad	-	-	1
Nominal installed capacity (mmbbl/d)	2,176	2,176	2,276
Brazil	2,176	2,176	2,176
Abroad	-	-	100

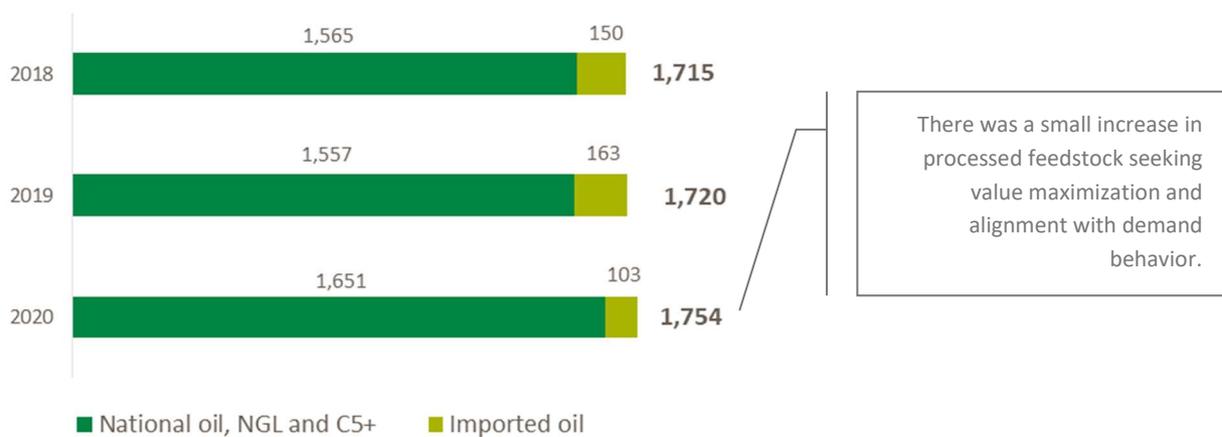
(1) Third party terminals that have existing contracts for the use of the storage service, except Transpetro contracts.

## Refining

We serve our oil products clients in Brazil through a coordinated combination of oil processing, importing and exporting that seeks to optimize our margins, considering different opportunity costs of domestic and imported oil, oil products in the several markets, as well as the costs for transport, storage and processing involved.

In 2020, we processed 1,754 mbb/d of oil in our 13 refineries. The following graphs show the processed feedstock and the performance of our refineries.

**PROCESSED FEEDSTOCK (MBBL/D)**



In October, our refineries broke an internal production record of S-10 Diesel low-sulfur diesel, producing 2.01 million m<sup>3</sup> of the product, a higher volume than in July, when production reached 1.81 million m<sup>3</sup>, and 25% higher than the June mark of 1.6 million m<sup>3</sup>.

The S-10 Diesel records follow the evolution of heavy-duty and utility vehicle engines powered by diesel, which are responsible for most of the goods circulated in Brazil. There are two types of road diesel in Brazil, the S-500 and the S-10, with the former being used by vehicles manufactured prior to 2012.

In 2020, there was an increase in the production of oil products and utilization factor of the refining system as compared to 2019. Despite the reduction in gasoline and jet fuel production between 2019 and 2020, the production of oil products rose in 2020 mainly due to increases in the production of low sulfur fuel oil for export, which resulted from higher bunker oil prices in the global market due to the new IMO 2020 quality specifications. Diesel production increased in 2020, despite the drop in sales in the domestic market, with the surplus being directed to exports.

Naphtha production increased in 2020, accompanying the increase in sales in the domestic market, due to the reduction in direct imports made by Braskem.

LPG production increased in 2020 due to an increase in sales resulting from lower average temperatures and social isolation because of the Covid-19 pandemic, both of which boosted the consumption of residential LPG.

In 2020, there was a decrease in the production of jet fuel following the reduction in sales due to the impact of Covid-19 on commercial jet fuel demand.

In addition to constructing new refineries, over the past 10 years we have made substantial investments in our existing refineries to increase our capacity to economically process heavier Brazilian crude oil, improve the quality of our oil products to meet stricter regulatory standards, modernize our refineries, and reduce the environmental impact of our refining operations. These investments in our existing refineries have been largely completed.

The following table sets out the performance of our refineries.

### PERFORMANCE OF REFINERIES

Refinery	Crude distillation capacity (mmbbl/d)	Nelson Complexity Index	Average throughput <sup>(1)</sup> (mmbbl/d)			Operational availability (%)			Utilization rate (%)		
	2020	2020	2020	2019	2018	2020	2019	2018	2020	2019	2018
LUBNOR	8	3.5	8	7	8	97.3	95.3	97.5	102.0	82.7	94.5
RECAP	57	6.8	39	50	50	96.8	96.2	97.6	68.4	87.8	93.1
REDUC	239	15	178	190	190	96.8	96.9	95.3	74.5	79.5	79.7
REFAP	201	6	129	138	135	97.6	93.7	95.8	64.1	68.8	66.8
REGAP	157	7.9	123	134	141	97.4	96.3	97.7	78.0	85.3	89.7
REMAN	46	1.8	27	32	30	97.9	97.9	97.1	59.3	69.1	64.3
REPAR	208	7.8	179	168	173	97.8	94.2	96.6	86.3	80.9	83.1
REPLAN	434	6.9	306	326	286	96.8	96.2	87.2	70.4	75.2	68.8
REVAP	252	8.6	216	185	213	97.1	94.5	96.5	85.9	73.5	84.8
RLAM	279	7.7	239	206	201	94.1	92.9	95.2	85.6	73.9	63.8
RPBC	170	10.2	143	133	140	96.2	95.3	97.5	84.0	78.3	82.4
RPCC	38	1	29	32	32	—	—	—	—	—	—
RNEST	88	10.7	93	74	67	96.8	97.8	94.6	105.7	84.4	90.2
Average crude oil throughput	—	—	1,709	1,675	1,664	—	—	—	—	—	—
Average NGL throughput	—	—	45	45	51	—	—	—	—	—	—
<b>Average throughput</b>	—	—	<b>1,754</b>	<b>1,720</b>	<b>1,715</b>	—	—	—	—	—	—
Crude Distillation capacity	2,176	—	—	—	—	—	—	—	—	—	—

(1) Considers oil and NGL processing (fresh feedstock).

## MAIN PRODUCTS, MARKETS AND STORAGE CAPACITY OF OUR REFINARIES

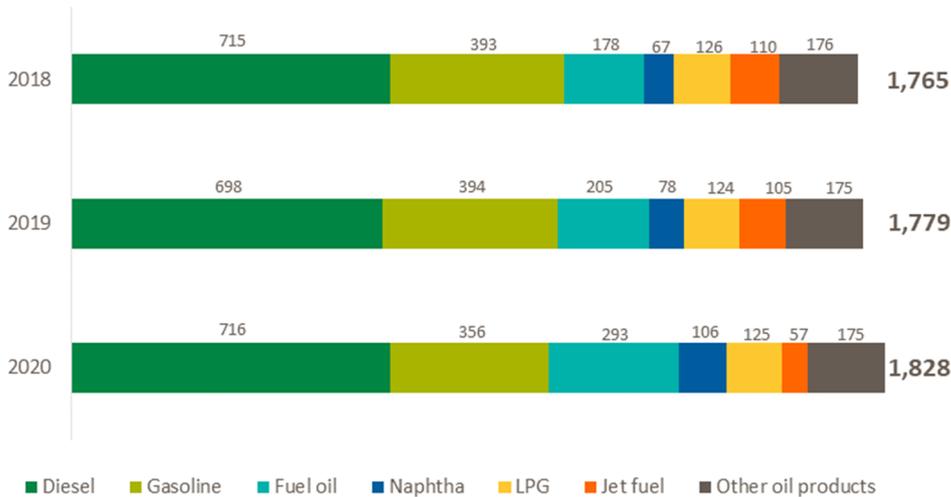
Refinery	Main products	Main markets in Brazil	Storage capacity (m bbl)	
			Crude oil	Oil products
LUBNOR	Asphalt (45%); Fuel Oil (35%); Lubricants (13%); Diesel (7%)	Lubricant Oil – sold to distributors and marketed nationwide 0.3 0.6 Asphalts – states in Northern and Northeastern Brazil and Minas Gerais	0.3	0.6
RECAP	Diesel (42%); Gasoline (33%); LPG (9%)	Part of the São Paulo metro region and petrochemical plants	0.5	1.8
REDUC	Diesel (25%); Gasoline (14%); Fuel Oil (19%); LPG (12%); Jet Fuel (4%); Naphtha (12%)	Rio de Janeiro, São Paulo, Espírito Santo, Minas Gerais, Bahia, Ceará, Paraná, Rio Grande do Sul	5.7	12.5
REFAP	Diesel (47%); Gasoline (20%); Naphtha (14%); LPG (7%)	Rio Grande do Sul, part of Santa Catarina and Paraná, in addition to other states by means of coastal shipping	3.2	1.4
REGAP	Diesel (48%); Gasoline (24%); Jet Fuel (4%); LPG (7%)	Currently supplies the state of Minas Gerais and, occasionally, the state of Espírito Santo. It can also expand its reach to the Rio de Janeiro market	1.7	6.0
REMAN	Gasoline (31%); Diesel (26%); Naphtha (9%); Jet Fuel (7%); Fuel Oil (15%)	Amazonas, Acre, Roraima, Rondônia, Amapá and Pará	0.7	1.5
REPAR	Diesel (47%); Gasoline (27%); LPG (8%)	Paraná, Santa Catarina, Southern São Paulo and Mato Grosso do Sul	2.9	1.9
REPLAN	Diesel (46%); Gasoline (21%); LPG (7%); Jet Fuel (3%)	Countryside of the state of São Paulo, Mato Grosso, Mato Grosso do Sul, Rondônia and Acre, Southern Minas Gerais and the so-called “Triângulo Mineiro”, Goiás, Brasília, and Tocantins	6.7	12.9
REVAP	Diesel (32%); Gasoline (19%); Naphtha (10%); Jet Fuel (10%); Fuel Oil (14%)	Paraíba Valley, the northern coast of the state of São Paulo, southern Minas Gerais, the São Paulo metro region, Midwestern Brazil and Southern Rio de Janeiro. It supplies 80% of the demand for jet fuel in the São Paulo state market and 100% of the Guarulhos International Airport	3.3	12.0
RLAM	Diesel (30%); Gasoline (17%); LPG (5%); Fuel Oil (39%)	Primarily the northeastern region of Brazil, followed by the north region and the state of Minas Gerais	— <sup>(1)</sup>	4.3
RPBC	Diesel (45%); Gasoline (25%); Fuel Oil (13%); LPG (6%)	Most products are intended for São Paulo’s capital. A portion is also shipped to Santos and to the Northern, Northeastern, and Southern Brazilian regions	2.5	6.8
RPCC	Fuel Oil (76%); Diesel (9%); Jet Fuel (5%); Gasoline (6%)	Rio Grande do Norte and southern Ceará	0.12	0.12
RNEST	Diesel (50%); Naphtha (13%); Coke (8%); Fuel Oil (27%)	North and Northeast of Brazil	— <sup>(2)</sup>	0.7

(1) Crude oil is supplied directly to RLAM tank farms of 4.1 m bbl, with no external crude oil storage.

(2) Crude oil is supplied directly to RNEST’s tank farms of 5.1 mbbbl, with no external crude oil storage.

With respect to oil products, we produced 1,828 mbbbl/d of oil products in 2020, as shown in the following graphic:

**OIL PRODUCTS PRODUCTION (MBBL/D)**



**Ongoing undertakings**

Located in southeastern Brazil (Itaboraí, in the state of Rio de Janeiro), the GASLUB Itaboraí project is comprised of the GASLUB Itaboraí Refinery, UPGNs and other underlying utilities. With respect to the UPGN, all critical bidding for the UPGN utilities was successfully completed during 2019. In 2020, some utilities systems were successfully completed and the unit start up is scheduled for 2022. We are studying new project alternatives for the GASLUB Itaboraí area that include integration with the refinery operating in Duque de Caxias (REDUC) for the production of basic lubricants G-II and high quality fuels and the construction of a Natural Gas Thermolectric Power Plant.



**International Maritime Organization**

In 2016, the International Maritime Organization (“IMO”) decided to reduce the allowable upper limit for sulfur content in marine fuels (bunker oil) from 3.5% to 0.5% from January 1, 2020 onwards.

From 2017 to the first quarter of 2019, we carried out studies and analyses in order to prepare our refineries and logistics to produce and deliver a compliant fuel. Furthermore, our increasing production of oil from pre-salt has low sulfur, allowing us to obtain fuel oil that already practically meets the bunker fuel specifications without requiring the addition of high amounts of diluents which give us a competitive edge in the global market.

We have a competitive advantage in the production of the IMO 2020 compliant marine fuel, allowing us to anticipate the market trend and satisfying the needs of our clients.

In the last quarter of 2019, the demand for LSFO increased in all ports where we offered the product while international prices have risen significantly.

In 2020, due to the rising value of the low sulfur fuel oil (LSFO), we have set new records of exports from Brazil three times, the last one being in September when 1.14 mmt of fuel oil (mainly LSFO grades) left Brazilian ports. Even with increasing export quantities during 2020, the average of LSFO grades from Brazil were commercialized at a positive crackspread against Brent.

## Logistics

Oil and oil products logistics connect the oil production systems to refineries and markets seeking to maximize the value of oil refining operations and the commercialization of oil and oil products in Brazil and abroad through an integrated system of logistics planning, sales, and operations and assets, as depicted below.



We directly manage some assets of this system, while we contract others with our wholly owned subsidiary Transpetro.

Transpetro is a logistics company which performs operations for the storage and handling of oil and its derivatives, ethanol, gas and biofuels for the supply of Brazilian machinery, thermoelectric and refineries, including import and export activities.

The terminals and pipelines operation is an important link in our supply chain. The oil is transported from the production fields to Transpetro terminals either by pipeline or by ship. From there, it is transported to refineries or for export. After refining, the oil products are again drained through pipelines to the terminals to be delivered to fuel distribution companies, which supply the Brazilian and global markets.

This operation covers a 7,719 km pipeline network and 44 terminals, 24 of which are marine and 20 onshore. The terminals have a total nominal storage capacity of 10.24 million m<sup>3</sup>. In 2020, Transpetro handled 568.4 million m<sup>3</sup> of oil and oil products, totaling 8,227 operations with tankers and oil barges.

**VOLUME MOVED AT TERMINALS AND PIPELINES (MILLION M<sup>3</sup>)**



The Brazilian economy is recovering more rapidly than expected due to strong agribusiness activity and the economic stimulus introduced by the Brazilian federal government in response to the Covid-19 pandemic. The resumption of demand in the domestic market resulted in the recovery of sales and production of oil by-products, prompting an increase in domestic refinery runs and leveraging the volumes handled by Transpetro. External demand for crude oil and fuel oil also exceeded estimates, increasing transshipment operations.

In 2020, we continued, in partnership with Transpetro, our implementation of the Integrated Pipeline Protection Program (“Pró-Dutos”). *Pró-Dutos* aims to expand and integrate all actions targeted at mitigating the risks caused by fuel thefts (illegal taps) in onshore pipelines. The scope of the program is multidisciplinary and focuses on six areas: intelligence, legislation, social responsibility, communication, technology and contingency.

In addition to our attention to operational safety, we seek to work in cooperation with public intelligence and security agencies to protect life and the environment around the areas in which we operate. In 2020, new pipeline routes for the transportation of LPG, naphtha and oil were put into operation. As a result, these highly flammable products are now transported far away from the urban centers of the metropolitan region of São Paulo, significantly mitigating the risk to human life caused by the fuel theft from pipelines. In 2020, 4,973 m<sup>3</sup> of oil and oil products were stolen, a decrease of 30% compared to 2019. The number of thefts in 2020 reached 201, slightly below the 203 occurrences in 2019.

We also launched a new and wide-ranging advertising campaign to raise public awareness of fuel theft risks and to encourage the public to report criminal actions through our communication channel. In addition, we continued to exercise our crises procedures and responses to emergencies resulting from fuel theft from pipelines. For example, in 2020, we completed the first integrated crisis simulation exercise between Transpetro and us.

## TERMINALS

Location	Terminal	Type	Nominal capacity (m <sup>3</sup> )
Alagoas	Maceió	Marine	58,266
	Manaus (REMAN)	Marine	–
Amazonas	Coari	Marine	81,705
	Candeias	Onshore	36,472
	Itabuna	Onshore	28,845
	Jequié	Onshore	28,111
Bahia	Madre de Deus	Marine	663,582
Ceará	Mucuripe	Marine	–
	Barra do Riacho	Marine	107,883
	Norte Capixaba	Marine	85,205
Espírito Santo	Vitória	Marine	10,706
Distrito Federal	Brasília	Onshore	72,309
Goiás	Senador Canedo	Onshore	127,449
Maranhão	São Luís	Marine	78,895
	Uberaba	Onshore	54,615
Minas Gerais	Uberlândia	Onshore	47,226
Pará	Belém	Marine	48,100
Paraíba	Cabedelo	Marine	10,745
Pernambuco	Suape	Marine	108,713
Paraná	Paranaguá	Marine	204,499
	Ilha d' Água	Marine	179,150
	Angra dos Reis	Marine	1,004,861
	Campos Elíseos	Onshore	547,243
	Ilha Redonda	Marine	81,833
	Japeri	Onshore	37,729
Rio de Janeiro	Volta Redonda	Onshore	29,649
	Guamaré	Marine	258,521
	Osório	Marine	842,100
Rio Grande do Norte	Niterói	Marine	26,978
	Rio Grande	Marine	101,408
	Biguaçu	Onshore	37,916
	Itajaí	Onshore	56,806
	Guaramirim	Onshore	18,926
Santa Catarina	São Francisco do Sul	Marine	472,408
Sergipe	Aracaju	Marine	156,940
	Santos	Marine	382,561
	São Sebastião	Marine	2,041,906
	Barueri	Onshore	206,262
	Cubatão	Onshore	160,836
	Guararema	Onshore	1,030,673
	Guarulhos	Onshore	164,194
	Paulínia	Onshore	274,349
	Ribeirão Preto	Onshore	50,826
	São Paulo	São Caetano do Sul	Onshore
<b>TOTAL</b>	<b>44</b>	<b>–</b>	<b>10,244,896</b>

In 2020, aiming to optimize the operational fleet and following the best practices of the shipping market, Transpetro performed an analysis of its ship portfolio and decided to dispose of assets over 25 years old. In this way, Transpetro created a divestment plan that will end in the first half of 2021. This action plan resulted in a reduction in the average age of the fleet from 13.57 years to 9.34 years in 2020, in addition to improving the operational availability indicator.

For more information on the vessels chartered or owned by us and Transpetro, see Exhibit 15.4 to this annual report.

## Marketing



### Main Sources

From the Total Supply of Oil Products

**1,828** mbb/d  
Come from the production of our refineries

**117** mbb/d  
Were imported



### Consumption

We Sold  
An average of

**1,664** mbb/d  
Of oil products for the Brazilian market

**243** mbb/d  
To the foreign market

**87%** of the total sales of our oil products were destined to the Brazilian market and derived from our refineries and imports.

Oil Products Production (mbbl/d)

1,765 1,779 1,828



2018 2019 2020

Import of Oil Products (mbbl/d)

195 186 117



2018 2019 2020

Brazilian Market Sales (mbbl/d)

1,807 1,754 1,664



2018 2019 2020

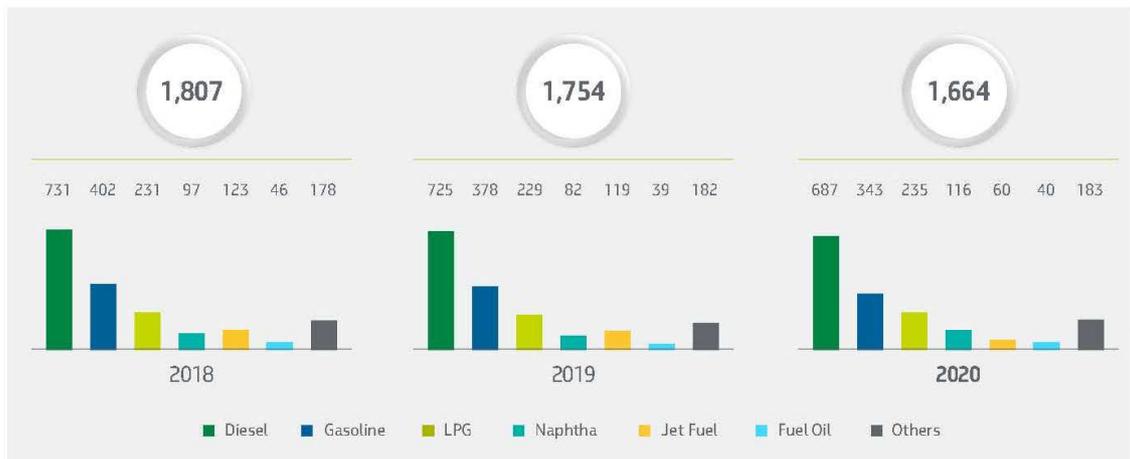
Export of Oil Products (mbbl/d)

164 199 243



2018 2019 2020

**SALES VOLUMES OF OIL PRODUCTS TO BRAZILIAN MARKET, PER PRODUCT AND TOTAL IN THE YEAR (MBBL/D)\***



\* Due to the divestment of Petrobras Distribuidora, the data for 2018 does not consider its sales.



**Diesel**

Diesel is a medium petroleum distillate used as fuel in vehicles with compression-ignites internal combustion engines (Diesel cycle engines). It is used mostly for cargo and passenger’s road transport (80%) and in the agriculture sector (10%). All diesel sold to end users in Brazil must be blended with biodiesel. In March 2020, the mandatory level of biodiesel in the fuel increased from 11% to 12%. However, due to the lack of raw material for the manufacture of the renewable fuel, the national regulatory agency temporarily reduced that percentage to 10% in September and October, and to 11% in November and December.

The drop in diesel sales in 2020 is mainly associated with the negative effects of Covid-19 on the economy and mobility and increased imports by other players. However, in the second half of 2020, with the advent of government emergency aid (through a program that distributes money to individuals who have a compromised income during the pandemic), the Brazilian economy partially recovered, especially the retail sector, which resulted in the increased demand for cargo transportation. The successful year in agribusiness, with a record grain crops, also contributed to this recovery. Moreover, we promoted commercial actions, such as a policy of specific auctions for diesel and gasoline to guarantee the operability of our assets together with an adequate profitability, which increased our sales in the second half of 2020 by 2.5% compared to the same period in the previous year (8.2% in the last quarter).



### Gasoline

Gasoline is a light petroleum distillate used in vehicles with spark-ignites internal combustion engines (Otto cycle engines). Refineries in Brazil produce a distillate called “gasoline A,” which must be blended with 27% of anhydrous ethanol (current mandate) at distributors sites and then sold to end users as “gasoline C” at gas stations. Its main competitors are hydrated ethanol (sold directly by producers to distributors, who resell it on gas stations) and CNG (sold by gas distributors directly to gas stations). In 2020, the “gasoline A” share in Brazilian Cycle-Otto market was about 50%.

The main factor behind the drop in gasoline sales in 2020 was the restriction on mobility imposed by the Covid-19 pandemic, which strongly impacted the Brazil market and our sales since the last weeks of March. However, in the last months of 2020, there was a recovery in gasoline sales due to the easing of restrictive measures and the lower competitiveness of hydrated ethanol. In 2020, total ethanol production suffered a significant reduction compared to 2019 because the sugar cane mills prioritized the production of sugar, which was more profitable in 2020. However, we promoted commercial initiatives that contributed to a 0.7% increase in our sales during the last quarter of 2020, as compared to the same period in 2019.



### LPG

The liquefied petroleum gas (LPG) is a light distillate composed by propane and butane. It is used as fuel for heating appliances such as cooking equipment, rural heating and water boilers, among others. In Brazil, around 80% of LPG consumption is for cooking, which demand is directly driven by population growth and real income growth. On the other hand, consumption is inversely correlated with local temperatures and the efficiency rate of cooking equipment. The remaining LPG demand (20%) comes from industrial and services sectors, whose demand is driven by economic growth.

The increase in LPG sales compared to 2019 can be attributed mainly to the effect of social isolation and social distancing resulting from the Covid-19 pandemic, which started in mid-March 2020. The isolation increased consumption of LPG for cooking, since the people prepare more meals in their homes.



### Jet Fuel

Jet-fuel is a medium petroleum distillate used as aviation fuel in aircrafts powered by gas-turbine engines. It is used by all commercial aviation companies (passengers and cargo transportation), which represents 90% of total Brazilian demand. Regarding commercial aviation, domestic flights comprise up to 60% of Brazilian jet-fuel demand, and the remaining 40% of jet-fuel demand comes from international flights. Jet-fuel demand is strongly correlated with GDP growth, as it directly affects the demand for travel – business and leisure.

The travel restrictions imposed by the Covid-19 pandemic led to the closure of borders and stagnation in airfare ticket sales. In April 2020, for example, the sales volume was less than 10% compared to the previous year.

However, the Brazilian domestic market is recovering strongly and the total sales of the derivative in December 2020 was 64% higher than during the same period of 2019.



### Fuel Oil

Fuel oil is a residual fraction of the petroleum distillation. It is used in industrial (mostly non-ferrous metallurgy companies) and electricity generation sectors (thermoelectric plants). The demand for fuel oil for industrial consumption depends mostly on GDP growth and on the natural gas availability (its main competing product).

The fuel oil thermoelectric plants participate marginally in the country's energy supply, entering into operation only when the water level in reservoirs are very low. In 2020, industrial use of fuel oil represented around 90% of demand, while the use in power generation represented only 10%.

Despite the adverse effects on the industry due to the Covid-19 pandemic, sales of fuel oil increased in 2020. The main consumer, an industry located in the city of Barcarena (State of Pará), operated normally in 2020, whereas the activities in the city were reduced until mid-May 2019 due to environmental issues (only after that, operations were fully resumed). There were sales of fuel for the complementary thermal plants only in the last quarter of 2020, a fact that generated a significant growth in sales in that period.



### Naphtha

Naphtha is a light petroleum distillate that is mainly used as raw material for petrochemical sector. This product is sold to three existing petrochemical plants in Brazil, which produce commodity chemicals such as ethylene, propylene, butadiene and aromatics (benzene, toluene, xylenes).

The expressive growth in sales of naphtha in 2020 is associated with the reduction of imports of the product by Braskem in the hubs of Bahia and Rio Grande do Sul, resulting in an increase in the supply of the product by our refineries.

Besides oil and oil products, we also trade natural gas, nitrogen fertilizers, renewables and other products.

#### BRAZILIAN SALES VOLUMES AND EXPORTS (MBBL/D)

	2020	2019	2018
Total oil products	1,663	1,738	1,787
Ethanol, nitrogen fertilizers, renewables and other products	8	7	17
Natural gas	292	350	345
<b>Total Brazilian market</b>	<b>1,963</b>	<b>2,095</b>	<b>2,149</b>
Exports <sup>(1)</sup>	957	735	594
<b>TOTAL BRAZILIAN MARKET AND EXPORTS</b>	<b>2,920</b>	<b>2,830</b>	<b>2,743</b>

(1) It mainly includes crude oil and oil products.



## Oil products prices

Crude oil is a commodity, the value of which depends on its quality. Traditionally, a lighter crude oil has a better value than a heavier one, given that it can generate higher value products. Recently, however, heavy crudes have shown a strong market value due to the possibility of high margin production when these crudes are processed in high complexity hardware refineries. Moreover, low-sulfur crude oil could have a better expectancy value than oil with higher sulfur content if they both have similar yields and physical properties. Different refineries assign different values to the same crude oil, depending on their conversion capacity and the products they intend to produce to supply their specific market. Refineries can process a wide variety of different crude oils, which make different crude oils competitors among themselves.

Crude oils are globally traded and their prices used to be referenced on international quotations, as WTI, Brent or Dubai. Depending on the quality, offer, demand, size lot, commercial conditions and logistics costs to make a crude oil cargo available at a certain delivery point, a premium or a discount negotiated between buyer and seller will be added to the reference quotation.

Refined oil products are commodities and their prices in the global market are driven by the supply and demand balance, crude oil price and crack spread. Crack spread refers to the overall pricing difference between a barrel of crude oil and oil products refined from it. It is an industry-specific type of gross processing margin. The “crack” being referred to is an industry term for breaking apart crude oil into the component products, including gases like propane, heating fuel, gasoline, light distillates like jet fuel, intermediate distillates like diesel fuel and heavy distillates like grease. Typically, a crack is defined in terms of one specific product versus one specific crude. For example, the diesel crack on Brent indicates how much the price of the individual product is contributing to refining profitability.

The price of a barrel of crude oil and the various prices of the products refined from it are not always in perfect synchronization. Depending on seasonality and global inventories among other factors, the supply and demand for particular distillates results in pricing changes that can impact the profit margins on a barrel of crude oil for the refiner.

As oil products are traded globally and can be transported between markets, prices around the world tend to fluctuate together, subject to local conditions.

### Diesel and Gasoline

Diesel and gasoline prices in the Brazilian market are defined taking into account the import parity price and margins to remunerate the risks inherent in the operation.

Prices readjustments of diesel and gasoline are carried out without defined frequency, according to market conditions and external environment analysis, enabling us to compete more efficiently and flexibly.

In 2020, we announced adjustments to selling prices at refineries, resulting in price decreases of 4.1% for gasoline and 13.2% for diesel, when comparing prices in place on December 31, 2020 with those effective as of December 31, 2019.

### LPG

In August 2019, prices for “residential LPG” began to adopt the import parity price as reference, similar to the “industrial/commercial LPG” policy. This allowed a greater alignment of prices for both segments.

In November 2019, we equalized prices for residential and industrial/commercial use. In March 2020, the Brazilian National Council of Energy Policy (CNPE) revoked the legal basis that allowed differentiation of prices by segment.

Price adjustments are made without defined periodicity, according to market conditions and analysis of internal and external environments.

In 2020, we announced adjustments to selling prices at refineries, resulting in price increases of 21.9% for LPG, when comparing prices in place on December 31, 2020 with those effective as of December 31, 2019.

## Imports, Exports, and International Sales

Our import and export of crude and oil products are driven by economic factors involving our domestic refining, the Brazilian demand levels and international prices. Most of the crude oil we produce in Brazil is classified as medium API gravity. We import some light crude oil to balance the slate for our refineries, and export mainly medium crude oil from our production in Brazil. In addition, we continue to import oil products to balance any shortfall between production from our Brazilian refineries and the market demand for each product.

In 2020, net exports increased by 362,000 bbl/d, reaching 743,000 bbl/d. This increase resulted from the record in oil exports, 33% higher than in 2019 and from an increase in fuel oil exports for bunker formulation due to the appreciation caused by the entry of IMO 2020. In addition, there was a drop in diesel and gasoline imports due to the negative impact on consumption caused by the Covid-19 pandemic.

### EXPORTS AND IMPORTS OF CRUDE OIL AND OIL PRODUCTS (M BBL/D)

	2020	2019	2018
<b>Exports</b>			
Crude oil	713	536	428
Fuel oil	194	133	121
Other oil products	50	66	43
<b>Total exports</b>	<b>957</b>	<b>735</b>	<b>592</b>
<b>Imports</b>			
Crude oil	97	168	154
Diesel	18	70	59
Gasoline	10	28	19
Other oil products	89	88	117
<b>Total imports</b>	<b>214</b>	<b>354</b>	<b>349</b>

Our crude oil, oil products and LNG trading activities aim to meet our internal demands or potential businesses opportunities identified by our commercial teams, seeking to optimize the buying and selling operations in the Brazilian and global markets, as well as offshore operations.

The international trading teams are based in the major global commercial hubs of oil and oil products, such as London, Houston and Singapore and Rotterdam and are comprised of crude oil and product traders, shipping and support operators.

One of our most representative trades in terms of volume and profitability is crude oil. We sell oil through long-term and spot-market contracts. In 2020, the crude oil volume committed through long-term contracts with fixed quantity subject to final agreement on commercial terms was approximately 100,000 bbl/d.

## Distribution

We sell our oil products to several distribution companies in Brazil. Until July 2019, we had a 71.25% stake in BR Distribuidora (“BRDT”), one of the largest distribution companies in the country. As a result of the follow-on offering closed in July 2019, we have a 37.5% participation in BRDT as of December 31, 2020.

In August 2020, our Board of Directors approved the proposal to sell our remaining 37.5% stake in the capital stock of BRDT, by means of a secondary public offering (follow-on). The launch date of the offer will be defined at a later time and is subject, among other conditions, to market conditions, the approval of our internal boards (particularly regarding price), and to the analysis of the CVM and other regulatory and self-regulatory bodies, under the terms of the applicable legislation.

Even after completing the sale of part of our shareholding in BRDT, we remain the owner of the main brands used by it, including those that identify service stations, fuel, loyalty program, aviation segments and certification program, among others.

A 10-year trademark license agreement is in place and grants BRDT a non-exclusive, paid, temporary license on certain trademarks we own, including but not limited to “Petrobras,” “Petrobras Podium,” “Petrobras Premmia,” “De Olho no Combustível,” “BR Aviation” and “Petrobras Grid.” The trademark license agreement was renegotiated before the follow on to incorporate changes necessary for both companies. It was signed in 2019 and is renewable for an additional 10-year period. Under the terms of this agreement, the license is granted exclusively to the service station and aviation segments, for which BRDT shall exclusively use the brands licensed by us. BRDT must also exclusively use our licensed brands in the oil and gas and biofuels segments. Meanwhile, during the term of the trademark license agreement, we undertake to refrain from operating in the service stations across the Brazilian territory. The definition of a “service station” under this agreement is any facility where oil and gas products and services and/or services related to any other energy sources (renewable or otherwise) intended to power automotive vehicles and watercrafts are offered to the Business-to-Consumer (or B2C) public, including convenience stores.

In 2020, we operated in the bottling, distribution and sale of LPG through our subsidiary Liquigás Distribuidora S.A. (“Liquigás”). In line with our goals of optimizing our portfolio, improving our capital allocation and creating value for our shareholders, we completed the sale of our entire stake in Liquigás on December 2020.

For more information on the sale of our equity stake in Liquigás see “Portfolio Management” in this annual report.

For more information on oil products clients, see “Our Business – Production - Customers and Competitors” in this annual report.

We also participate in the retail sector in other South American countries, as follows:

- **Colombia:** Our operations through Petrobras Colombia Combustibles S.A. (PECOCO) include 123 service stations and a lubricant plant with a production capacity of 54,000 m<sup>3</sup>/year. In March 2020, we announced the beginning of PECOCO’s divestment process;
- **Uruguay:** We had 88 service stations. In February 2021, we sold our stake in PUDSA and ended the operation in this country.
- **Chile:** Following the sale of our distribution operations in Chile, which was concluded in January 2017, we entered into a brand licensing agreement in that country, for the initial term of eight years. To operate our acquired assets in Chile, Southern Cross created Esmax, a company that operates as our licensee in the fuel distribution segment;

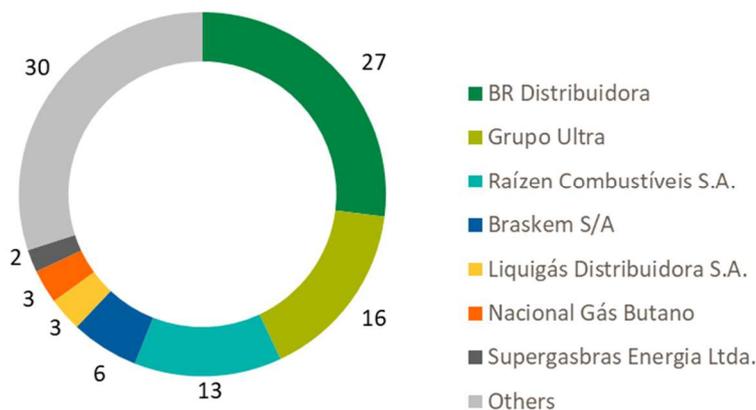
- Paraguay:** Until March 8, 2019, our operations included 201 service stations, the distribution and sales of fuel at three airports and an LPG refueling plant. Our operations were sold to Paraguay Energy, a subsidiary of Copetrol Group. The sale agreement also included the licensing for the exclusive use of our brands by Nextar (the successor of Petrobras Paraguay Operaciones y Logística SRL) in service stations in Paraguay, for the initial term of five years.

For more information of the divestment process, see “Portfolio Management” in this annual report.

## Customers and Competitors

We interact with around 470 clients in Brazil, in regards to liquid oil products, seven of which account for 70% of the total volume sold.

**LIQUID OIL PRODUCTS CLIENTS (% VOL)**



The sale of oil products to distribution companies is done by contracts executed in accordance with ANP regulations.

We offer a virtual commercial platform, called Canal Cliente to Brazilian market companies. The platform works 24 hours a day, seven days a week. Through this online platform, clients can place orders for products, schedule withdrawals and track the entire business process up to the payment phase.

According to information provided by the ANP, we have a dominant participation in the Brazilian market for refining. We own and operate 13 refineries in Brazil and a shale industrialization unit (“SIX”). SIX is presented in the Shale Industrialization section in this annual report.

In June 2019, we signed a commitment with CADE which consolidates the understanding between the parties on the execution of the divestment of refining assets and SIX in Brazil.

For more information on our agreement with CADE regarding our divestments in refining assets, see “Risks – Risk Factors – Operational Risks” and “Portfolio Management” in this annual report.

With respect to the trading of oil products in the Brazilian market, we face competition from importers, formulators, other domestic producers and petrochemical plants. In 2020, our participation in diesel and gasoline markets decreased compared to the previous year, mainly due to the increase in imports by third parties. In the specific case of gasoline, demand also reflected competition with a substitute product, hydrous ethanol, which recorded a sharp increase in consumption during 2020.

## Other Activities

### Petrochemicals

We engage in the petrochemical sector through the following companies:

#### OUR SHAREHOLDING IN PETROCHEMICAL COMPANIES IN BRAZIL AND THEIR MAIN PRODUCTS

Company/Main products	Location	Nominal capacity (mmt/y)	Our shareholding	Other shareholding
<b>Braskem</b>				
Ethylene	Bahia	5.00	36.15%	Novonor (38.32%); Others (25.53%)
Polyethylene		4.11		
Polypropylene		4.50		
<b>DETEN Química S.A.</b>				
LAB <sup>(1)</sup>	Bahia	0.22	27.88%	Petresa (69.78%); Others (2.34%)
LABSA <sup>(1)</sup>		0.12		
<b>METANOR S.A./COPENOR S.A.<sup>(2)</sup></b>				
Formaldehyde	Bahia	0.09	34.34%	GPC –Grupo Peixoto de Castro (45,22%); Tesouraria (0.59%); Others (20.44%)
Hexamine		0.01		
<b>FCC Fábrica Carioca de Catalisadores S.A.</b>				
Catalysts	Rio de Janeiro	0.04	50.00%	Albemarle (50.00%)
Additives		0.01		
<b>PETROCOQUE S.A.</b>				
Calcined petroleum coke	São Paulo	0.55	50.00%	Universal Empreendimentos e Participações Ltda (50.00%)

(1) Feedstock for the production of biodegradable detergents.

(2) Copenor S.A. is a subsidiary of Metanor S.A.

## Shale Industrialization

We operate shale processing through our shale industrialization unit (“SIX”), an operating unit with installed capacity of 5,880 t/d, located in São Mateus do Sul, Brazil. We have developed a technology that covers all stages of the manufacturing process. The products obtained from shale processing are fuel oil, naphtha, fuel gas, liquefied gas, sulfur and paving inputs that are used by various industries, such as ceramics, oil refineries, cement plants, sugar mills and agricultural undertakings. The process also produces shale water, which is an input used to formulate foliar fertilizers.

Fuel oils obtained from shale are suitable for industrial consumption in urban centers because they are highly fluid, very easy to handle and eliminate the need for pre-heating. This allows for reductions in burning operating costs and, as such, is ideal for cold climates.

In conducting our operation, we work to repair mined areas through an environmental program that consists of reforestation with native species and the return of fauna to rehabilitated land.

In line with our repositioning process, in 2019, we signed a commitment with the CADE which consolidated our understanding on the execution of divestment of refining assets in Brazil and started the divestment processes of seven refining units (Reman, Lubnor, Rnest, Rlam, Regap, Repar and Refap) and SIX.

For more information on our agreement with CADE regarding our divestments in refining assets, see “Risks – Risk Factors – Operational Risks” and “Portfolio Management” in this annual report.

## Biofuels



### BioRefino 2030

In 2020, we launched the *BioRefino 2030* Program, which aims to transform the refining park in sync with a low-carbon based economy and anticipates projects for the generation of new, modern and sustainable fuels, such as renewable diesel and biojet.

Renewable diesel is an advanced biofuel, produced from vegetable oils using our proprietary HBIO technology. The resulting fuel presents the same structure as conventional diesel fuel. According to reports from the Biodiesel Producers Association (APROBIO), this new fuel reduces the emission of greenhouse gases by 70% compared to mineral diesel oil and by 15% compared to ester biodiesel. Renewable diesel is also free of contaminants and does not cause any damage to engines, effectively increasing vehicle life and reducing transportation costs. The authorization for the commercial sale of this biofuel in Brazil will depend on a new regulation to be issued by the National Petroleum Agency (ANP).

BioQAv, or biojet fuel, will be used worldwide to reduce the emission of greenhouse gases in the aviation sector. This was determined by the International Civil Aviation Organization (ICAO) and will be

mandatory in Brazil in 2027. The production process for BioQAv, through hydrogenation, uses the same raw materials required for the production of renewable diesel and produces renewable diesel (HVO) as a co-product.

We also operate in the production of biodiesel through our wholly owned subsidiary P BIO, which manages our activities for the production, logistics and marketing of these products.

Brazil is a global leader in the use and production of biofuels. The anhydrous ethanol content requirement for gasoline sold in Brazil is 27%.

Historically, Brazil is a major producer of ethanol and sugar and some companies that operate in this market sell the excess electricity generated from the burning of sugarcane bagasse.

There is mandatory blend of 13% biodiesel in all diesel sold in Brazil on or after March 2021, with gradual scheduled increases of 1% per year, until it reaches a mandated 15% in 2023. P BIO had a 50% interest in BSBios Indústria e Comércio de Biodiesel Sul Brasil S.A. ("BSBios"), which owns two biodiesel plants. In February 2021, we announced the sale of P BIO's entire stake in BSBios to RP Participações em Biocombustíveis S.A. ("RPBio"), which owned the remaining 50% stake in BSBios. P BIO has three biodiesel plants for its own operations. However, the Quixada biodiesel plant, one of our directly owned units, is in hibernation state since November 2016. Our biodiesel production capacity in the other two in operation is 8.63 mbb/d. In 2020 we supplied 4.81% of Brazil's biodiesel demand, according to the ANP.



## Main Assets

	2020	2019	2018
<b>Biofuels</b>			
Biodiesel production units - P BIO	3	3	3
Biodiesel production capacity (mbbl/d) - P BIO	10.5 <sup>(1)</sup>	10.0 <sup>(1)</sup>	8.2 <sup>(1)</sup>
Biodiesel production units - BSBios	2	2	2
Biodiesel production capacity (mbbl/d) - BSBios	14.3 <sup>(2)</sup>	12.1 <sup>(2)</sup>	9.9 <sup>(2)</sup>

(1) Includes the capacity of Quixadá biodiesel plant, which has been in hibernation state since November 2016.

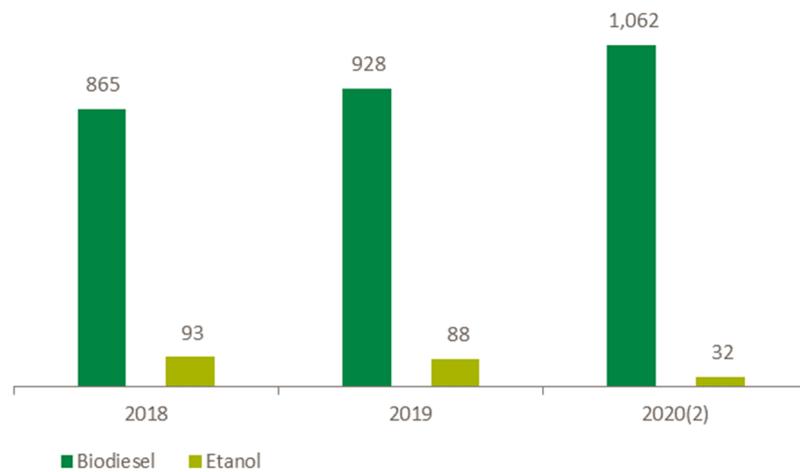
(2) Includes total production capacity in two plants in which we have 50% interest through BSBios Sul Brasil.

With respect to divestments, in July 2020, we announced the sale of PBIO’s entire stake in Bambuí Bioenergia S.A. (Bambuí). This stake represented 8.40% of Bambuí shares and was sold to Turdus Participações S.A. (Turdus), which held the remaining 91.60% stake in the company. However, Turdus and Bambuí initiated an arbitration process against PBIO. In February 2021, we also announced the sale of PBIO’s entire stake in BSBios to RPBio. In addition, we are in the process of divesting our stake in PBIO. In September 2020, we announced the beginning of the binding phase of the sale of all of our shares in this wholly owned subsidiary.

For more information on our divestments, see “Portfolio Management” in this annual report.

In accordance with our Strategic Plan, we decided to exit the biodiesel and ethanol production market. Nevertheless, we are working to produce renewable diesel and BioQav, in response to the sustainability policies of the Brazilian energy matrix. We entered into several strategic transactions to this end.

**BIOFUELS PRODUCTION<sup>(1)</sup> (THOUSAND M<sup>3</sup>)**



- (1) Includes 100% of the volume of our equity method investee (net production of PBIO in biodiesel, considering PBIO share in the investee, was 68.4% in 2018, 67.4% in 2019 and 64.5% in 2020 ).
- (2) Ethanol production figures from 2020 are up to July 10, 2020, the date when we sold our share in Bambuí, our investee in this segment (net production of PBIO in ethanol was 8.4% of total).

# Gas and Power

## Overview

We process gas produced in our oil fields in our natural gas processing units (“UPGNs”) that have the capacity to treat 106.15 million m<sup>3</sup>/d of natural gas in Brazil. We market this natural gas, along with gas imported from Bolivia and LNG acquired in the global market, to several consumers and to the thermoelectric plants.

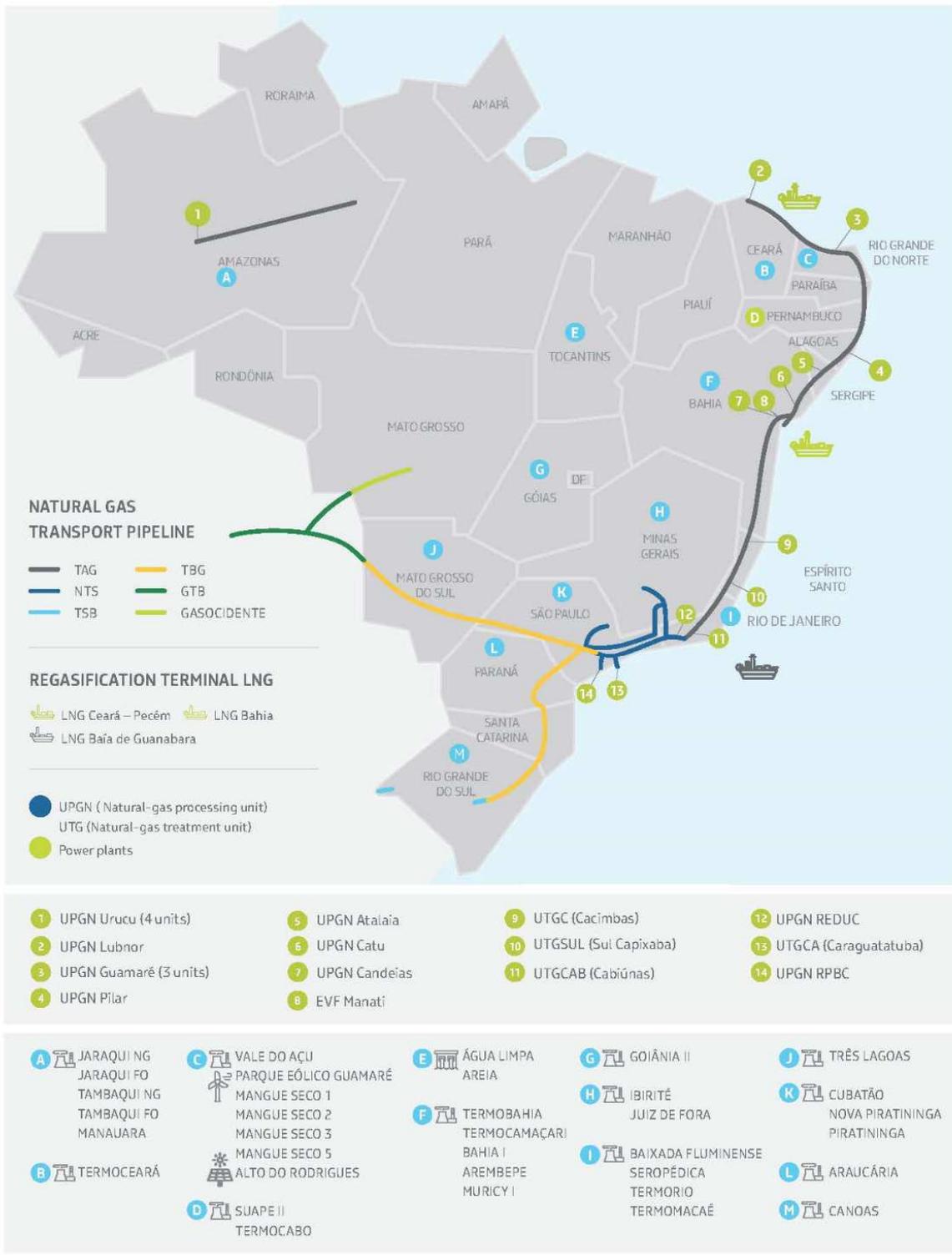
We also operate in the generation and sale of electric energy through thermal power plants fired by natural gas, diesel oil and fuel oil.



## Main Assets

	2020	2019	2018
<b>Natural gas</b>			
Gas pipelines in Brazil (km)	4,686 <sup>(1)</sup>	9,190	9,190
Processing Units	22	22	23
Brazil	19	19	20
Bolivia	3	3	3
Processing capacity (million m <sup>3</sup> /day)	149	149	149
Brazil	105	105	105
Bolivia	44	44	44
Regasification terminals	3	3	3
Regasification capacity (million m <sup>3</sup> /day)	47	47	47
<b>Power</b>			
Number of thermal power plants	20	20	20
Installed capacity (thousand MW)	6.1	6.1	6.1

(1) In July 2020, we entered into a share purchase and sale agreement for our remaining 10% interest in TAG, which has 4,504 km of pipelines.



## Natural Gas

Our Gas and Power segment comprises gas processing, transportation and distribution, LNG regasification (Ceará, Bahia and Rio de Janeiro), gas-fired, oil-fuelled and flex fuel power generation.

The Gas and Power segment strategy is:

- Act competitively in the trading of its own gas.
- Optimize the thermoelectric portfolio focusing on self-consumption and trading of its own gas.
- Withdraw completely from gas distribution and transport.

## Processing of Natural Gas

Natural gas from our exploration and production activities needs to be processed in processing units, to be transformed into marketable products. These products serve as fuel and raw material for different uses, such as vehicular, industrial and residential uses, as well as uses in the fertilizer industry and thermoelectric power generation.

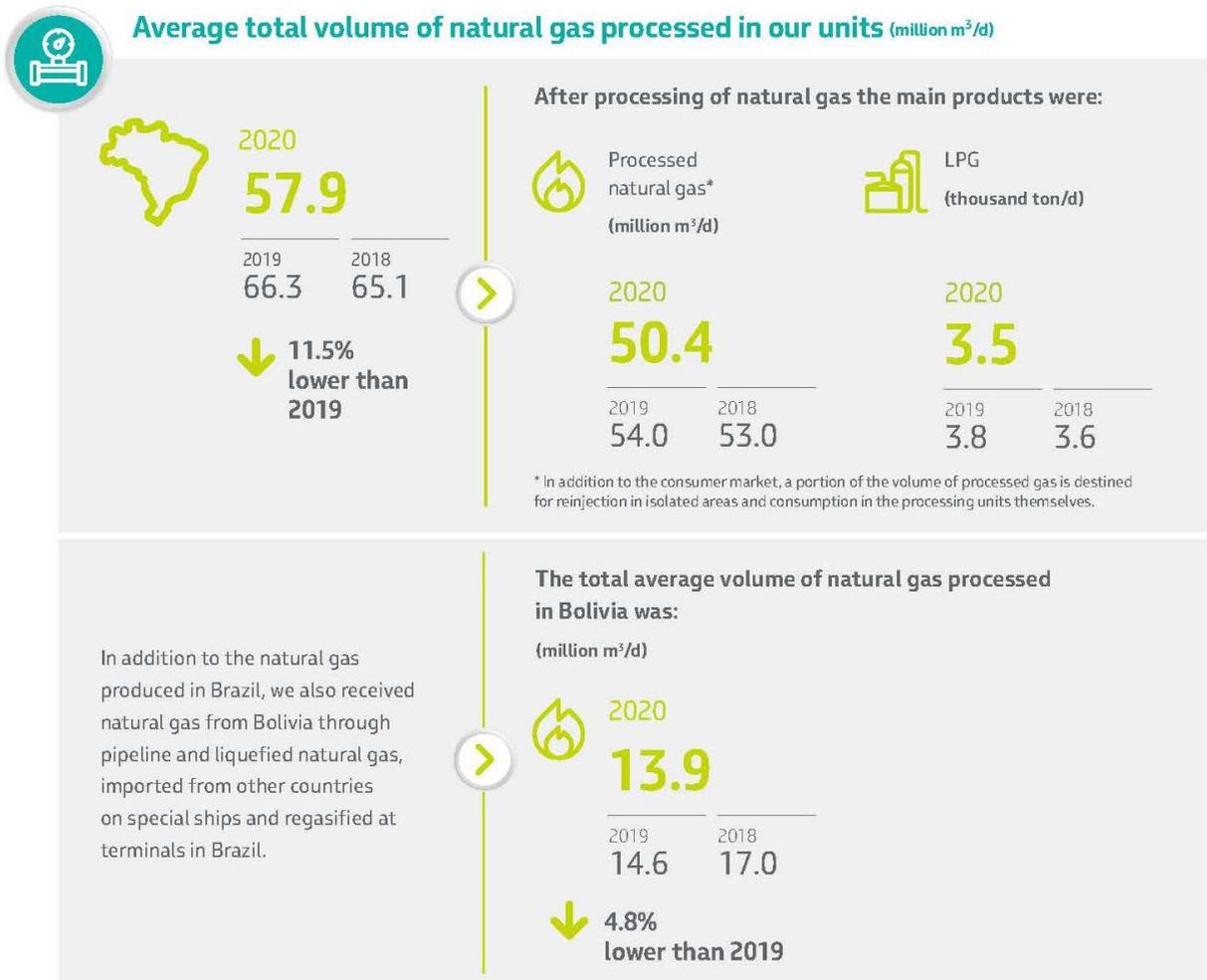
Our UPGNs are located in the states of Amazonas, Ceará, Rio Grande do Norte, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro and São Paulo in Brazil as well as in Bolivia, where we have the capacity to process natural gas in its gaseous and condensed forms.

The current processing capacity and production of our UPGNs in Brazil is:

## PROCESSING CAPACITY AND PRODUCTION OF OUR UPGNS IN BRAZIL

Location	Number of units	2020 Processing capacity (million m <sup>3</sup> /d)	2020			2019			2018			
			Unprocessed natural gas (million m <sup>3</sup> /d)	Processed natural gas (million m <sup>3</sup> /d)	LPG (thousand t/d)	Unprocessed natural gas (million m <sup>3</sup> /d)	Processed natural gas (million m <sup>3</sup> /d)	LPG (thousand t/d)	Unprocessed natural gas (million m <sup>3</sup> /d)	Processed natural gas (million m <sup>3</sup> /d)	LPG (thousand t/d)	
UTGCAB	Rio de Janeiro	1	24.60	22.58	17.54	0.98	23.37	17.35	0.71	22.15	17.85	0.61
UTGCA	São Paulo	1	20.00	12.43	11.84	0.62	14.68	14.03	0.70	11.47	10.95	0.47
UTGC	Espírito Santo	1	18.10 <sup>(1)</sup>	3.98	3.50	0.59	4.89	4.36	0.82	6.41	5.83	0.92
UTGSUL	Espírito Santo	1	2.50	0.48	0.46	–	0.58	0.57	–	1.01	0.96	–
REDUC	Rio de Janeiro	1	5.00	1.05	0.93	0.05	1.46	1.02	0.06	1.02	0.71	–
RPBC	São Paulo	1	2.00	0.08	–	–	0.46	0.43	–	0.52	0.37	–
LUBNOR	Ceará	1	0.35	–	–	–	–	–	–	–	–	–
URUCU	Amazonas	4	12.20	11.61	10.81	1.08	12.10	11.56	1.21	12.32	11.45	1.26
GUAMARÉ	Rio Grande do Norte	3	5.7	0.69	0.63	0.1	1.36	1.25	0.15	1.45	1.34	0.16
PILAR	Alagoas	1	1.8	1.24	1.20	0.07	1.24	1.19	0.07	1.40	1.34	0.10
ATALAIA	Sergipe	1	3.00	0.21	0.20	0.02	0.78	0.73	0.06	0.83	0.76	0.08
CATU	Bahia	1	2.00	1.22	1.06	–	1.57	1.45	–	1.71	1.58	–
CANDEIAS	Bahia	1	2.90	–	–	–	–	–	–	–	–	–
EVF	Bahia	1	6.00	2.32	2.20	–	3.54	–	–	4.80	–	–
MANATI	Bahia	1	6.00	2.32	2.20	–	3.54	–	–	4.80	–	–
<b>TOTAL</b>		<b>19</b>	<b>106.15</b>	<b>57.89</b>	<b>50.37</b>	<b>3.51</b>	<b>66.33</b>	<b>53.95</b>	<b>3.78</b>	<b>65.09</b>	<b>53.16</b>	<b>3.60</b>

- (1) The UTGC unit's project was estimated to have a gas richness of approximately 14%. However, it actually presented an approximate richness of 8.5%. Thus, there was an opportunity to increase the nominal capacity of the plant without impacting the process, as the real richness was less than the projected richness.



### Logistics

We use a pipeline system to transport natural gas from processing plants, regasification terminals and the border with Bolivia, to the local distributors, as well as for the internal consumption of our units. Brazil has an integrated pipeline system centered around two main interlinked pipeline networks, a gas pipeline connection with Bolivia and an isolated pipeline in the northern region of Brazil (all together spanning over 9,190 km).

## OUR SHARE IN GAS TRANSPORTATION COMPANIES IN BRAZIL

Company	Gas pipeline extension (km)	Our shareholding	Other shareholders
Transportadora Brasileira Gasoduto Bolívia Brasil S.A. ("TBG")	2,593	51%	BBPP Holdings Ltda. (29%); YPFB Transporte S.A. (12%); GTB –TBG Holdings S.A.R.L. (8%)
Nova Transportadora do Sudeste S.A. ("NTS")	2,043	10%	Nova Infraestrutura Fundo de Investimento em Participações (FIP) (82.35%); Investimentos Itaú S.A. (Itaúsa) (7.65%)
Transportadora Sulbrasileira de Gás S.A. ("TSB")	50	25%	Ipiranga Produtos de Petróleo S.A. (25%), Repsol Exploração Brasil (25%) e Total Gas and Power Brazil (25%)
<b>TOTAL</b>	<b>4,686</b>	<b>—</b>	

In July 2020, we sold our remaining 10% interest in Transportadora Associada de Gás S.A. (TAG), with the group comprised of ENGIE and CDPQ.

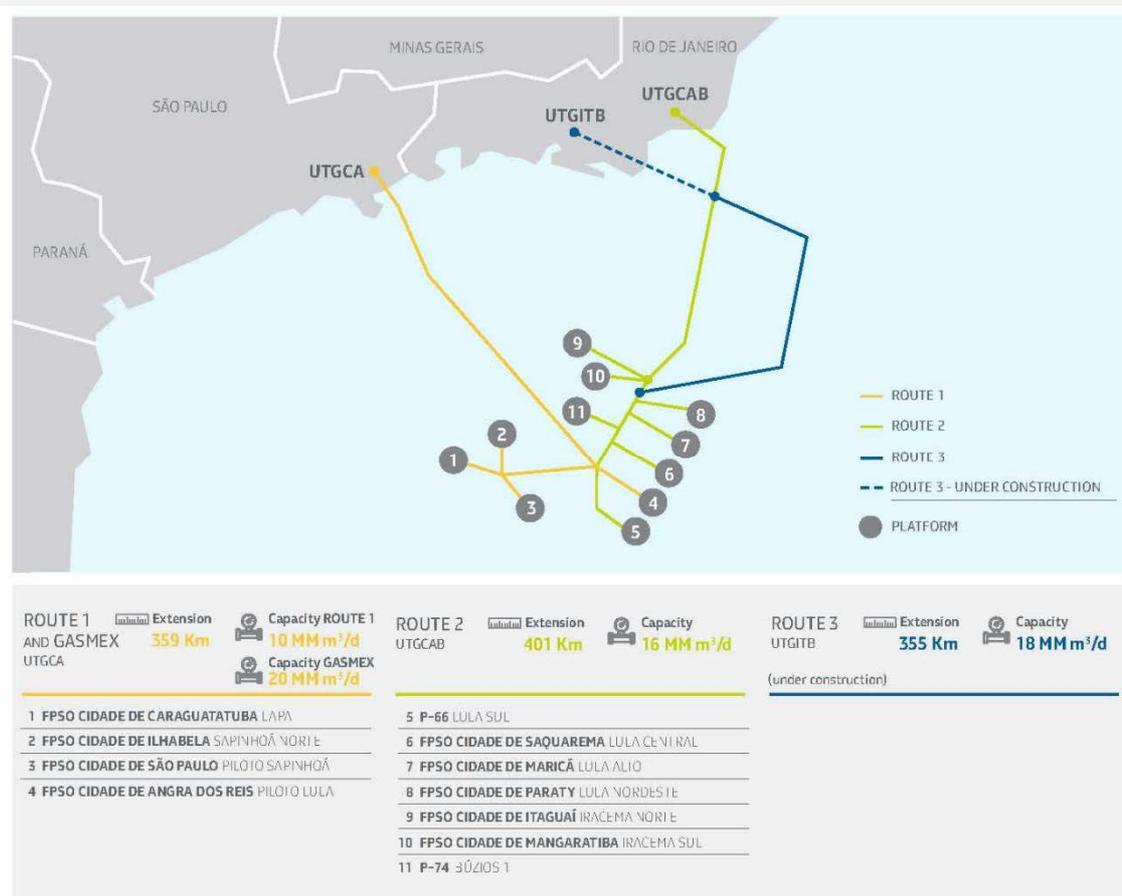
In March 2020, we announced the start of the divestment process of our remaining 10% interest in Nova Transportadora do Sudeste S.A. (NTS).

For more information on our divestments, see "Portfolio Management" in this annual report.

In addition, outside Brazil we hold an 11% stake in Gás Transboliviano S.A. ("GTB"), which is responsible for the Bolivian side of the Bolivia-Brazil gas pipeline, measuring 557 km.



### Gas from Pre-Salt



In order to derive natural gas from our production of the Santos Basin pre-salt pole, in addition to using part of the existing infrastructure, we invested in the construction of subsea pipelines (routes) integrated with the processing units, which seek to optimize the use of natural gas.

We have invested in the following flow routes: **ROUTE 1 AND GASMEX:** The 359 km pipeline consists of two stretches: Route 1, which is the stretch connecting the Tupi Platform to the Mexilhão Platform, with capacity to flow up to 10 million m<sup>3</sup>/d, and GASMEX, which is the stretch connecting the Mexilhão platform to the Monteiro Lobato Gas Treatment Unit (“UTGCA”), in the city of Caraguatatuba in the state of São Paulo, with capacity to flow up to 20 million m<sup>3</sup>/d of gas produced in the Santos Basin pre-salt. We own 65% of Route 1, Shell owns 25% and Petrogal owns the remaining 10%.

**ROUTE 2:** The 401 km pipeline links the Santos Basin pre-salt to the UTGCAB processing asset, in the city of Macaé in the state of Rio de Janeiro. It had an initial capacity to flow up to 13 million m<sup>3</sup>/d, which then increased to 16 million m<sup>3</sup>/d. In July 2019, the ANP authorized the pipeline to operate with 20 million m<sup>3</sup>/d. We own 65% of Route 2 Tupi-Cernambi, Shell owns 25% and Petrogal owns the remaining 10%. We own 55% of Route 2 Cernambi-TECAB, Shell owns 25%, Petrogal owns 10%, and Repson owns the remaining 10%.

**ROUTE 3:** This 355 km gas pipeline will connect the pre-salt to the natural gas processing plant located in Itaboraí in the state of Rio de Janeiro, for the sale of up to 18 million m<sup>3</sup>/d. Three hundred seven km of the pipeline will be offshore, and 48 km onshore. The natural gas processing plant will have two units with a total capacity of processing 21 million m<sup>3</sup>/d of natural gas, which will increase the supply of natural gas, LPG and natural gasoline (C5+) to the market. The construction of Route 3 is scheduled to start in 2022. We own 100% of Route 3.

Recently installed and upcoming units in the Santos Basin pre-salt will be progressively connected to Route 2 (P-66, P-69, P-68, P-76) and to Route 3 once they become operational (P-67, P-75, P-77, P-70, FPSO Carioca and FPSO Almirante Barroso). All projects will be able to flow through any of the three flow routes once the system is fully implemented.

## Marketing and Sales

The total volume of natural gas sold by us in 2020 was 68.3 mmm<sup>3</sup>/d. The volume of our natural gas consumption by industrial, gas-fired electric power generation, commercial and retail customers in 2020 was 54.7 mmm<sup>3</sup>/d, representing a small decrease of approximately 11% compared to 2019. This decrease is mainly attributable to the Covid-19 pandemic.

In 2020, the consumption of natural gas by our refineries and fertilizer plants was 13.5 mmm<sup>3</sup>/d, the same level as in 2019.

Below we present our sources and consumption in 2020:



\* Apparent differences in the sum of the numbers are due to rounding off.

### Opening the gas market

In July 2019, we signed an agreement with CADE, which consolidates the understandings between the parties on the promotion of competition in the natural gas industry in Brazil. This agreement includes the sale of shareholdings in gas transportation and distribution companies and, among other matters, increases the flexibility for third parties to have access to our processing plants and release capacity in certain gas transportation contracts to which we are part. The purpose of the agreement is to preserve and protect the competitive conditions, aiming to open the Brazilian natural gas market, encouraging new agents to enter this market, as well as suspending administrative procedures established by CADE court to investigate our natural gas business. The agreement signed in July 2019 also contains our commitment to sell the following ownership interest: (i) our 10% stake in Nova Transportadora do Sudeste S.A. (NTS); (ii) our 10% stake in Transportadora Associada de Gás S.A. (TAG); (iii) our 51% stake in Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG); and (iv) our indirect stake in gas distribution companies, either by selling our 51% interest in Gaspetro, or by selling our indirect stakes in the distribution companies. In 2020, additional initiatives were implemented and for 2021 other initiatives are planned, which are included in the infographic below.

Additionally, we initiated the GAS + Program, which aims to increase our competitiveness in the natural gas segment within Brazil's current conditions of market opening. With this program, we will launch new commercial products, new forms of relationships with customers, new tools (such as digital contracts and sales through automated platforms), and new business models (such as negotiated access to the outflow infrastructure and gas processing in our Gas Treatment Units), as well as direct the portfolio to high performance assets.

The Gas + Program also includes initiatives aimed at enhancing the efficiency and profitability of our Gas and Energy segment, thereby contributing to our high performance in a competitive market.

The program also provides for the incorporation of digital transformation initiatives, utilizing technological advances as an important resource for improving performance in all processes, whether at the industrial or business level.

## OPENING THE GAS MARKET

Full compliance with the commitments signed with CADE, anticipating the deadlines initially agreed

### Completed Actions

- JUL/19** ● End of exclusive natural gas transportation contracts.
- SEP/19** ● Execution of the Commitment Agreement with the ANP within the scope of the TBG Public Call.
- Indication of needed injection and withdraw capacities\* for the TAG and NTS transportation system.
- DEC/19** ● Gas treatment units processing services contract draft made available.
- Transition Agreement under the natural gas supply contract with YPFB.
- JAN/20** ● Appointment of independent member of the Board of Directors of TAG, TBG, Gaspetro, NTS and TSB.
- Hiring of a Monitoring Trustee to track compliance with the CADE terms.
- FEB/20** ● Disclosure of the full sale of our 51% equity stake in Gaspetro.
- MAR/20** ● Conclusion of negotiation with YPFB to change trade conditions regarding the acquisition of natural gas.
- Disclosure for the divestment in the remaining 10% stake in NTS.
- JUL/20** ● Divestment of our 10% stake in TAG (Closing).
- SEP/20** ● Public notice for the leasing of the Regasification Terminal in Bahia.
- OCT/20** ● Signing of the Integrated Pipeline System and the Integrated Natural Gas Processing System, in order for companies to commercialize their produced volumes of natural gas directly to consumers.
- Bidding offer for the divestment of Gaspetro.
- NTS's response concerning the capacities indicated by Petrobras.
- DEC/20** ● Acceptance by Petrobras of the capacities indicated.
- Disclosure for the sale of our 51% equity stake in TBG.

### Actions in Progress in 2021

-  Negotiations with TAG concerning the indication of the capacities for the Entry/Exit system.
-  Leasing of the Regasification Terminal in Bahia.
-  Divestment from NTS and GASPETRO.
-  Definition of the model for full divestment from TBG.
-  Negotiation of third party access to the gas outflow systems.
-  Negotiation of third party access to gas treatment plants.

\*As part of the commitments assumed with CADE, in order to enhance market opening, Petrobras is no longer the exclusive shipper, starting to indicate the natural gas injection and withdraw needs in different locations, allowing the transportation companies to offer to other shippers the access to the remaining pipeline capacity.

For more information on our agreement with CADE, see “Risks – Risk Factors – Operational Risks” and “Portfolio Management” in this annual report.

### **Natural gas sales contracts and long-term gas purchase and transportation commitments**

We sell our gas primarily to local gas distribution companies and to gas-powered plants, generally based on standard take-or-pay, medium term supply contracts. This represents 66% of total demand volumes. The price formulas under these contracts are mostly aligned with Brent oil prices and the U.S. dollar. They were negotiated under the new gas bill.

In 2020, we renegotiated some existing mid-term natural gas sales contracts with local natural gas distribution companies in order to promote adjustments to commercial conditions tailored to specific market demands. We ultimately negotiated with 12 local distribution companies that represent 46% of the non-thermoelectric natural gas market and they were negotiated by the new gas policy.

When we began construction of the Bolivia-Brazil pipeline (“GASBOL”) in 1996, we entered into a long-term Gas Supply Agreement (“GSA”), with the Bolivian state-owned company Yacimientos Petroliferos Fiscales Bolivianos (“YPFB”), to purchase certain minimum volumes of natural gas at prices linked to the global fuel oil price through 2019. In 2020, the agreement may be extended until all contracted volume has been delivered by YPFB. We estimate that the agreement will be extended at least through May 2024 under the existing terms.

In December 2019, we signed a transition agreement with YPFB under the GSA which sets a transition period (from January 1, 2020 to March 10, 2020), during which we continued the ongoing negotiation process. Our purpose is to change certain commercial conditions according to the Brazilian natural gas market opening process and the new context of the Bolivian market.

Following the transition agreement, in March 2020, we and YPFB signed a new amendment to the GSA, (Amendment Eight), which refers to the volume of gas initially contracted that has not yet been delivered by YPFB until December 31, 2019. This amendment provides for the reductions of (i) the YPFB supply obligation to us from the current volume of 30.08 million m<sup>3</sup>/d to 20 million m<sup>3</sup>/d and (ii) our take-or-pay obligation from the current volume of 24.06 million m<sup>3</sup>/d (annual basis with make-up possibility) to 14 million m<sup>3</sup>/d (daily basis without make-up possibility), without any changes on the gas price formula, thus allowing the surplus volume of natural gas to be traded directly by YPFB with other market agents in Brazil.

Therefore, the execution of this amendment reaffirms our commitment to the opening of the Brazilian natural gas market, stimulating its competition by encouraging new agents to enter the market.

Furthermore, on March 21, 2020, we invoked force majeure under the GSA due to the impacts in the natural gas demand caused by the Covid-19 pandemic and, the consequent declaration of force majeure by each of the local distribution companies of natural gas in Brazil with respect to their own contracts with us. As a result, any payments of take-or-pay obligations were suspended up until the end of this event which occurred on August 31, 2020, which the GSA came back into full force.

According to the GSA provisions, the suspension of payments of take-or-pay obligations will be in place up until the date when we have taken the remaining gas volume originally agreed with YPF. We estimate that this will occur in 2024 or 2025, depending on the gas demand that we perceive until then.

On the Bolivian side of GASBOL, while YPF has shipper's obligations, we agreed to pay, on behalf of YPF, the amounts related to 24 million m<sup>3</sup>/d directly to GTB through 2019 and pre-paid six million m<sup>3</sup>/d through 2039.

On the Brazilian side of GASBOL, after 2020, we expect 12 million m<sup>3</sup>/d of remaining volume related to Bolivian gas imports and 5.2 million m<sup>3</sup>/d related to extra capacity between Paulínia, in the state of São Paulo, and Araucária, in the state of Paraná. Any additional capacity must be contracted through a public process conducted by the ANP, in accordance with Brazilian law. In December 2019, the ANP approved the resumption of the ANP Public Call 01/2019 process, authorizing Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. ("TBG") to disclose the result of the guaranteed proposal stage and the signing of transport service contracts. As a result, we hired 18.08 million m<sup>3</sup>/d of entry capacity and 13.84 million m<sup>3</sup>/d of exit capacity for 2020 and 8.00 million m<sup>3</sup>/d of entry capacity and 1.82 million m<sup>3</sup>/d of exit capacity for 2021.

In December 2020, the ANP authorized TBG to implement a public auction, as an alternative to the postponed ANP Public Call 02/2020. After the conclusion of the auction, we hired additional entry capacity of 3.00 million m<sup>3</sup>/d and exit capacity of 9.47 million m<sup>3</sup>/d for the year 2021.

More recently, the ANP approved the resumption of its Public Call 02/2020 process, relating to the period from May 2021 up to December 2025. We plan to participate in this process.

Our volume obligations under the ship-or-pay arrangements entered into with GTB and TBG were originally designed to match our gas purchase obligations under the GSA.

The table below shows these contractual commitments under the above agreements for the five-year period from 2021 through 2025.

**FUTURE COMMITMENTS UNDER NATURAL GAS SALES CONTRACTS** (MILLION M<sup>3</sup>/D)

	2021	2022	2023	2024	2025
<b>To local gas distribution companies:</b>					
Related parties <sup>(1) (2) (3)</sup>	5.89	0.00	0.00	0.00	0.00
Third parties <sup>(2) (3)</sup>	29.47	33.88	31.89	31.68	33.73
<b>To gas-fired power plants:</b>					
Related parties <sup>(1) (2) (3)</sup>	1.13	0.41	0.10	0.00	0.00
Third parties <sup>(2) (3)</sup>	13.29	7.93	8.59	6.20	5.09
<b>Total<sup>(1) (2) (3)</sup></b>	<b>49.77</b>	<b>42.22</b>	<b>40.57</b>	<b>37.87</b>	<b>38.82</b>
Estimated amounts to be invoiced (US\$ billion) <sup>(3)(4)</sup>	4.13	3.46	3.36	3.05	3.13
<b>Purchase Commitments</b>					
<b>Purchase commitments to YPFB</b>					
Volume obligation (mmm <sup>3</sup> /d) <sup>(5)</sup>	14.00	14.00	14.00	14.00	14.00
Volume obligation (mmcf/d) <sup>(5)</sup>	494.41	494.41	494.41	494.41	494.41
Brent Crude Oil projection (US\$) <sup>(6)</sup>	45.50	45.00	50.00	50.00	50.00
Estimated payments (US\$ million) <sup>(7)</sup>	652.95	634.30	690.27	692.16	461.96
<b>Transportation Commitments</b>					
<b>Ship-or-pay contract with GTB</b>					
Volume commitment (mmm <sup>3</sup> /d)	6.00	6.00	6.00	6.00	6.00
Volume commitment (mmcf/d)	211.89	211.89	211.89	211.89	211.89
Estimated payments (US\$ million) <sup>(8)</sup>	0.40	0.40	0.40	0.40	0.40
<b>Ship-or-pay contract with TBG<sup>(10)</sup></b>					
Volume commitment (mmm <sup>3</sup> /d) <sup>(9)</sup>	39.49 <sup>(11)</sup>	11.20	11.20	11.20	11.20
Volume commitment (mmcf/d)	1,394.47	395.53	395.53	395.53	395.53
Estimated payments (US\$ million) <sup>(8)</sup>	331.22	5.89	5.95	5.97	5.95
<b>Ship-or-pay contract with NTS<sup>(10)</sup></b>					
Volume commitment (mmm <sup>3</sup> /d)	158.21	158.21	158.21	158.21	158.21
Volume commitment (mmcf/d)	5,587.01	5,587.01	5,587.01	5,587.01	5,587.01
Estimated payments (US\$ million) <sup>(8)</sup>	1,009.60	1,009.60	1,009.60	1,012.37	1,009.60
<b>Ship-or-pay contract with TAG<sup>(10)</sup></b>					
Volume commitment (mmm <sup>3</sup> /d)	74.28	74.28	74.28	74.28	74.28
Volume commitment (mmcf/d)	2,620	2,620	2,620	2,620	2,620
Estimated payments (US\$ million) <sup>(8)</sup>	1,313.74	1,313.74	1,313.74	1,317.34	1,313.74

(1) For purposes of this table, "related parties" include all local gas distribution companies and power generation plants in which we have an equity interest and "third parties" refer to those in which we do not have equity interest.

(2) Estimated volumes are based on our Strategic Plan. Includes the migration of volumes from related parties to third parties due to the divestment in Gaspetro in 2021.

(3) Estimates are based on outside sales and do not include internal consumption or transfers.

(4) Prices may be adjusted in the future, according to formula defined in contract, and actual amounts may vary.

(5) 23.95% of contracted volume supplied by Petrobras Bolivia.

(6) Brent Crude Oil price forecast based on our Strategic Plan.

(7) Estimated payments are calculated using gas prices expected for each year based on our Brent Crude Oil price forecast. Gas prices may be adjusted in the future based on contract clauses and amounts of natural gas purchased by us may vary annually.

(8) Amounts calculated based on current prices defined in natural gas transport contracts.

(9) Includes ship-or-pay contracts relating to TBG's capacity increase.

(10) We undertook divestment processes for TAG in of 2019 and 2020. The ship-or-pay contracts shown with TBG, NTS and TAG are not included in our audited consolidated financial statements, since such contracts are intercompany transactions.

(11) The sum of legacy point-to-point contracts (TCO, TCX and CPAC) was considered with the new entry and exit contracts, object of public call No. 001/2019.

## Distribution

Distributors provide gas through their distribution networks to commercial establishments, residences, industries, vehicles and thermoelectric plants.

Gaspetro is a holding company that consolidates our equity interests in 19 of the 27 state natural gas distributors, and Mitsui holds the remaining 49% interest. In 2020, we started the sale process of our entire 51% stake in Gaspetro. In addition, we hold a 37.5% stake in BR Distribuidora, which holds a 49% stake in a natural gas distribution company in the state of Espírito Santo.

For more information on our divestment process, see “Portfolio Management” in this annual report.

In 2020, of the total of 34.1 mmm<sup>3</sup>/d of gas sold to distributors, 40% was distributed through distributors which participation is partially held by Gaspetro.

## Power

Brazilian electricity needs are mainly met by hydroelectric power plants and other sources of energy (wind, coal, nuclear, fuel oil, diesel oil, natural gas used in thermoelectrics, and others). The Free Marketing Environment (“ACL”) and the Regulated Marketing Environment (“ACR”) are involved in the regulation of the electric energy market in Brazil.

Hydroelectric power plants are dependent on the annual level of rainfall. When rainfall is abundant, Brazilian hydroelectric power plants generate more electricity. As a result, under these circumstances, there is less demand for power generation by thermoelectric power plants.

We generate and sell electric power from a generator complex consisting of 20 thermoelectric power plants that we own or lease, operating under the authorization regime as an independent power producer. They are powered by natural gas, diesel or fuel oil, with a total installed capacity of 6,131 MW. These plants are designed to supplement power from the hydroelectric power plants.

In 2020, the total electricity generated in Brazil, according to the ONS, was 66,229 MWavg. Our thermoelectric power plants contributed 1,756 MWavg (2,028 MWavg in 2019 and 2,205 MWavg in 2018). This was due to the decrease in energy consumption resulting from the Covid-19 pandemic and the increase in storage of the reservoirs supplying the hydroelectric plants of the National Interconnected System (as a result of the favorable rainfalls throughout the year).

We also have plants with generation through renewable sources. In addition, we hold participation in other projects of power generation. This adds up to 315 MW to our electricity generation capacity.

**SALES AND GENERATION OF ELECTRICITY<sup>(1)</sup>**

	2020	2019	2018
Electricity Sales (ACL) – average MW <sup>(2)</sup>	837	1,168	1,231
Electricity Sales (ACR) – average MW	2,404	2,788	2,788
Electricity generation – average MW	1,756	2,028	2,205

(1) The generation value in the table above includes only the plants where we manage the operation.

(2) Includes electricity sales from the Gas and Power segment to other operating segments, service and other revenues from electricity companies.

**Electricity sales and commitments for future generation capacity**

Under Brazil's power pricing regime, a thermoelectric power plant is only allowed to sell electricity that is certified by the MME and that corresponds to a fraction of its installed capacity. The certificate is granted to ensure a constant sale of commercial capacity over the course of years to each power plant, given its role within Brazil's system to supplement hydroelectricity power during periods of unfavorable rainfall. The amount of certified capacity for each power plant is determined by its expected capacity to generate energy over time.

The total capacity certified by the MME (*"garantia física"*) may be sold through long-term contracts in auctions to power distribution companies (standby availability), and through bilateral contracts executed with free customers and used to meet the energy needs of our own facilities.

In exchange for selling this certified capacity, the thermoelectric power plants must produce energy whenever requested by ONS. In addition to a capacity payment, thermoelectric power plants also receive a reimbursement for variable costs (declared to MME to calculate commercial certified capacity) incurred whenever they are requested to generate electricity.

In 2020, the commercial capacity certified by MME for all thermoelectric power plants we control was 3,532 MWavg. Our total generating capacity was 6,131 MWavg. Of the total 4,226 MWavg of commercial capacity available for sale in 2020, approximately 57% was sold as standby availability in public auctions in the regulated market (compared to 67% in 2019) and approximately 20% was committed under bilateral contracts and self-productio, i.e. sales to related parties, (compared to 28% in 2019).

Under the terms of standby availability contracts, we receive a fixed amount whether or not we generate any power. Additionally, whenever we have to deliver energy under these contracts, we receive an additional payment for the energy delivered that is set on the auction date and is revised monthly or annually, based on inflation-adjusted international fuel price indexes.

The table below shows the evolution of our installed thermoelectric power plants' capacity, our purchases in the free market and the associated certificated commercial capacity.

**INSTALLED POWER CAPACITY AND UTILIZATION**

	2020	2019	2018
Installed capacity (MW)	6,131	6,148	6,148
Certified commercial capacity (Mwavg)	3,524	3,770	3,900
Purchases in the free market (Mwavg)	693	391	821
Commercial capacity available (Lastro) (Mwavg)	4,193	4,161	4,720

The table below shows the allocation of our sales volume between our customers and our revenues for each of the past three years:

**VOLUMES OF ELECTRICITY SOLD** (MWAVG)

	2020	2019	2018
<b>Total sale commitments</b>	3,242	3,958	4,020
Bilateral contracts	496	812	832
Internal consumption	342	356	399
Public auctions to distribution companies	2,404	2,788	2,788
<b>Generation volume</b>	1,756	2,028	2,205
<b>Revenues (US\$ million)<sup>(1)</sup></b>	1,855	2,334	3,066

(1) Includes electricity sales revenues from the Power segment to other operating segments, service and other revenues from electricity companies.

Our power assets and their respective locations are listed in the table below.

## OUR POWER ASSETS (MW)

	Type <sup>(1)</sup>	Region	Power Plant	Fuel <sup>(1)</sup>	Installed Capacity	Shareholding or PIE	Petrobras Capacity	Partners	
Assets under Petrobras Management (own, lease or controlled)	1	UTE	Ibirité	NG	226	100%	226		
	2		Fluminense	NG	530	100%	530		
	3		Seropédica	NG/DO	386	100%	386		
	4		Cubatão	NG	219	100%	219		
	5		Nova						
	6		Piratininga	NG	386	100%	386		
	7		Piratininga	NG	190	100%	190		
	8		Termorio	NG	1,058	100%	1,058		
	9		Juiz de Fora	NG/ET	87	100%	87		
	10		Três Lagoas	NG	386	100%	386		
	11		Termomacaé	NG	923	100%	923		
	12		South	Canoas	DO/NG	249	100%	249	
	13		Termobahia	NG	186	100%	186		
	14		Vale do Açu	NG	323	100%	323		
	15		Termocamaçari	NG	120	100%	120		
	16		Termoeará	NG/DO	220	100%	220		
	17		Bahia I	FO	32	100%	32		
	18		Arembepe	FO	150	100%	150		
	19	Muricy I	FO	147	100%	147			
	20	Jaraqui NG	NG	76	93.66%	71	Breitener Jaraqui S.A. and Breitener Tambaqui S.A. 100% owned by Breitener		
	Jaraqui FO	FO	81	93.66%	76	Energética – Petrobras: 93.66%; GGR Participações S.A.: 3.34%; Alcântara, Mendes & Cia: 1%			
	Tambaqui NG	NG	93	93.66%	87				
	Tambaqui FO	FO	63	93.66%	59				
<b>Petrobras Management</b>					<b>6,131</b>	<b>100%</b>	<b>6,111</b>		
21	PV	Northeast	Solar Alto do Rodrigues		1	100%	1		
<b>Subtotal Petrobras Management</b>					<b>6,132</b>		<b>6,112</b>		

	Type <sup>(1)</sup>	Region	Power Plant	Fuel	Installed Capacity	Shareholding or PIE	Petrobras Capacity	Partners	
Petrobras Shareholdings	1	Southeast /Midwest	Goiânia II	DO	140.3	30%	42	Enegen Participações S.A.: 70%; Petrobras: 30%	
	2		South	Araucária	NG	484	18.80%	91	Copel: 20,3%; Copel GeT: 60.9%; Petrobras: 18.8%
	3	Northeast	Suape II	FO	381	20%	76	Savana SPE Incorporação Ltda.: 80%, Petrobras: 20%	
	4		Termocabo	FO	50	12%	6	Brasympe Energia S.A.: 60% (Petrobras has 20% of shareholding at Brasympe); EBRASIL S.A.: 24%; SZF Participações Ltda: 14%; OZ&M Incorporação Participação Ltda: 2%	
	5		North	Manauara	NG/FO	85	52%	44	Petrobras: 40%; TEP: 60% (Petrobras has 20% of shareholding at TEP)
	6	WIND	Northeast	Mangue Seco 1		26	49%	13	Alubar Energia S.A.: 51%; Petrobras 49%
	7			Mangue Seco 2		26	51%	13	FIP Pirineus: 49%; Petrobras: 51%
	8			Mangue Seco 3		26	49%	13	Wobben Windpower Industria e Comércio Ltda: 51%; Petrobras: 49%
	9			Mangue Seco 4		26	49%	13	Wobben Windpower Industria e Comércio Ltda: 51%; Petrobras: 49%
	10	PCH	Southeast /Midwest	Água Limpa		14	14%	2	TEP: 70% (Petrobras has 20% of shareholding at TEP); RPE—Produtora de Energia Elétrica Ltda: 30%
	11			Areia		11	14%	2	TEP: 70% (Petrobras has 20% of shareholding at TEP); RPE—Produtora de Energia Elétrica Ltda: 30%
<b>Subtotal Petrobras Shareholdings</b>					<b>1,269</b>		<b>315</b>		
<b>TOTAL</b>					<b>7,401</b>		<b>6,427</b>		

(1) NG—Natural Gas; FO—Fuel Oil; DO—Diesel Oil; ET—Ethanol; PIE—Independent Power Producer; UTE—Thermoelectric Power Plant; PCH—Small Hydroelectric Plant; PV—Photovoltaic.

Contracts of our thermoelectric power plant at Regulated Marketing Environment (or “ACR”) and their respective contracted power and contract expiration date are listed in the table below.

## OUR CONTRACTS AT REGULATED MARKETING ENVIRONMENT

Region	Power plant	Contracted power (MWavg)	Contract expiration date
Southeast /Midwest	Baixada Fluminense	416.4	2033
	Seropédica	278.0	2023
	Cubatão	141.0	2024
	Termorio	704.0	2022 (352MW), 2024 (352MW)
	Três Lagoas	127.0	2023
	Termomacaé	200.0	2025
Northeast	Termo Ceará	141.0	2023 (64MW) e 2024 (77MW)
	Bahia I	5.0	2025
	Arembepe	101.0	2023
	Muricy	101.0	2023
	Termobahia	100.0	2021
	Vale do Açu	90.0	2021

We also have invested, independently and in partnership with other companies, in renewable power generation sources in Brazil, including wind. We hold indirect interests in two small hydroelectric power plants (Areia and Água Limpa) through our associate Termoelétrica Potiguar S.A. (“TEP”). We also own a solar power plant unit, Unidade Fotovoltaica de Alto Rodrigues. Additionally, we participate in joint ventures in four wind power plants (Mangue Seco 1, 2, 3 and 4), all of which are currently undergoing divestment processes. During the beginning of 2021, we signed the sale of Mangue Seco 1, 2, 3 and 4. Our strategy is to maximize value through active portfolio management, maintaining investments in research and development in renewable energy. In order to invest in such areas in the future, we are planning to invest US\$70 million/year in R&D for decarbonization and renewables.

As of December 31, 2020, our power generation capacity (alone and through the equity interests we hold in renewable energy companies) was as follows:

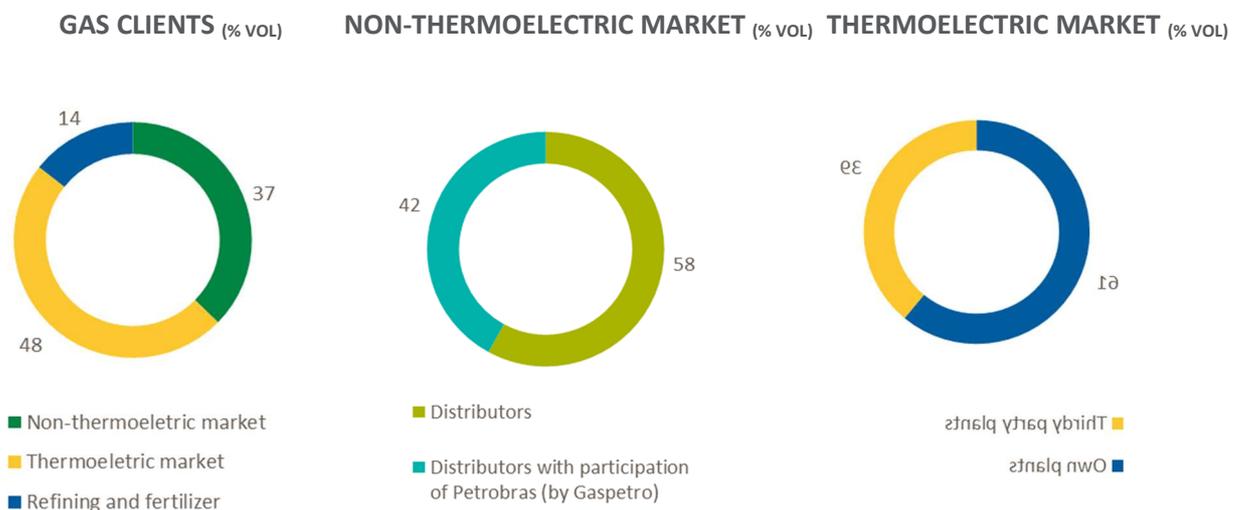
- 3.6 MW of hydroelectric capacity;
- 1.1 MW of solar capacity; and
- 51.5 MW wind capacity, corresponding to 49.5% of the 104 MW of Mangue Seco 1, 2, 3 and 4.

We and our partners sell energy from these plants directly to the Brazilian federal government through auctions.

In 2018, we signed the Memorandum of Understanding (“MoU”) with the Norwegian company Equinor ASA (“Equinor”) to evaluate developments in offshore wind energy, which expired in 2020. In 2020, we signed a letter of intent (“LoI”) with Equinor aiming to jointly evaluate a future wind project in the Campos Basin, using R&D funding. For more information on our divestment process, see “Portfolio Management”.

## Customers and Competitors

Natural gas is marketed to 21 clients, most of which are distributors. The entire demand for natural gas includes our non-thermoelectric, thermoelectric, refining and fertilizer markets, as well as the consumption by natural-gas carriers contracted by us for the provision of transportation services.



In the energy segment, we operate in the regulated market (energy distributors) and free market (marketers and free consumers/large consumers). We have 134 clients and suppliers, of which 39 are distributors, 36 are marketing companies, 11 are generating companies and 48 are free consumers. All contracts are registered at the Electricity Trading Chamber, a sector agent responsible for the settlement and accounting of these contracts.

In the commercialization of natural gas, we act as importers and domestic producers who can directly sell our product to the distributors or thermoelectric plants. We expect an increase in competition due to new regulation under discussion which aims to improve the regulatory framework of the natural gas sector and to establish guidelines for a new design of the market that allows the entry of new agents in the sector in order to promote competition.

The transportation of natural gas also consists of a monopoly of the Brazilian federal government and may be exercised upon concession or authorization by companies incorporated under Brazilian law, with headquarters and administration in the country.

In the natural gas distribution segment we operate through indirect participation in state companies, where each distributor has a monopoly for its concession area, and there is no competition, since the Brazilian federal constitution provides that the natural-gas distribution segment can only be exercised through concession by public authorities of each state.

We concluded the transition to new contracts for the sale of natural gas to Local Distribution Companies in which the prices of the molecule started to be linked to the variation in the price of Brent oil, replacing the basket of international quotations of fuel oils that until then prevailed. This improvement brought greater transparency to the update of contractual prices and also allowed selling prices to respond more quickly to international references, making them more competitive, as observed in the year 2020.

In addition, throughout 2020, due to the Covid-19 pandemic and the consequent structural reduction in the demand for natural gas in the entire Brazilian market, there was a declaration of force majeure by all Local Distribution Companies in their respective gas purchase contracts. By September 2020, with the resumption of consumption in the non-thermoelectric market, the legal and contractual requirements of force majeure were no longer met, so the contracts were resumed under their normal supply conditions.

As mentioned before, in July 2019, we signed an agreement with CADE, which consolidates understandings between the parties on the promotion of competition in the natural gas industry in Brazil.

For more information on our agreement with CADE regarding our divestments in the natural gas industry, see “Risks – Risk Factors – Operational Risks” and “Our Business – Gas and Power – Marketing” in this annual report.

In the energy segment, we operate in generation and sale. In generation, we compete with third-party thermoelectric plants, as well as other generators with other energy sources (hydro, wind, solar). In terms of commercialization, we compete with other energy marketers.

## Fertilizers

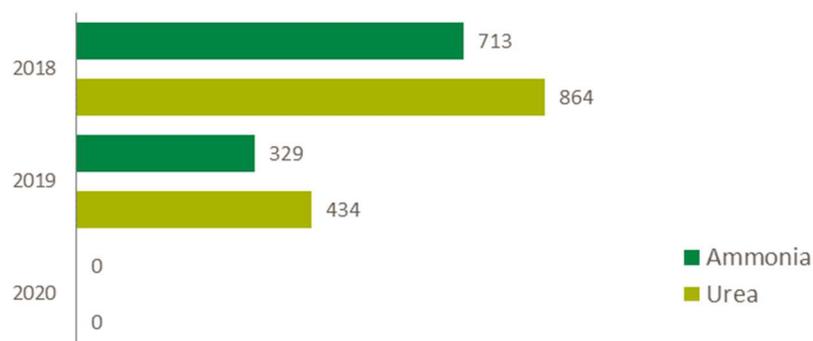
We have two fertilizer plants in Brazil, one located in the state of Bahia, (“FAFEN-BA”), and other in the state of Sergipe (“FAFEN-SE”), and one subsidiary located in Paraná, Araucaria Nitrogenados S.A. (“ANSA”). Their main products are ammonia and urea. Together these plants have an installed capacity of 1.852 million t/year of urea, 1.406 million t/y of ammonia, 319,000 t/y of ammonium sulfate and 800,000 tons/y of ARLA-32. The ammonium sulfate unit in Sergipe, however, did not operate in 2020. Most of our ammonia production is used to produce urea, and the excess production is mainly sold in the Brazilian market. We also have an unfinished Fertilizer Unit (UFN-III) in Mato Grosso do Sul.

We continue to pursue our strategy of leaving the fertilizer market and focusing on assets that generate greater financial return and are more adherent to our business. In 2019, we mothballed our plants located in Bahia and Sergipe and, after that, we signed lease agreements with Proquigel Química S.A. (“Proquigel Química”), a company of the Unigel Group, leasing FAFEN-BA and FAFEN-SE for a total amount of R\$177 million. The agreements have an initial term of 10 years and may be extended for additional 10 years. Leases became effective in August 2020.

In August 2020, we concluded the mothballing of Araucária Nitrogenados S.A. (ANSA) and in September, we announced the beginning of the divestment process for the sale of our participation in this fertilizer plant. In October 2020 we started the binding phase.

In February 2020, we announced the beginning of the non-binding phase related to the sale of all our equity stake in the Nitrogen Fertilizer Unit (UFN-III). UFN-III is a nitrogen fertilizer industrial project located in Três Lagoas, in the state of Mato Grosso do Sul, Brazil. The construction of UFN-III began in September 2011, but was interrupted in December 2014, with a physical advance of about 81%. The completion of UFN-III will be the responsibility of the potential buyer.

### FERTILIZER PRODUCTION (THOUSAND TONS)





## Main Assets

	2020	2019	2018
<b>Fertilizers</b>			
Fertilizer plants	3 <sup>(1)</sup>	3 <sup>(1)</sup>	3
Urea production capacity (thousand ton/year)	1,852 <sup>(1)</sup>	1,852 <sup>(1)</sup>	1,852
Ammonia production capacity (thousand ton/year)	1,406 <sup>(1)</sup>	1,406 <sup>(1)</sup>	1,406

(1) Includes FAFEN-BA, FAFEN-SE and ANSA capacity.

# Portfolio Management

Our active portfolio management, part of our Strategic Plan, is the key driver of our partnerships and divestments, which aim to improve our operating efficiencies and returns on capital, and generate additional cash to reduce our debt, while supporting better investment opportunities. Currently, our partnerships and divestments comprise the sale of minority, majority or entire participations in some of our subsidiaries, affiliates, and assets to strategic or financial investors or by means of public offerings.

Our divestment portfolio contains more than 50 assets at different stages of the sale process. Along with reducing debt, divestments contribute to improving capital allocation and consequently create value for the shareholder.

In line with the TCU, guidelines and current legislation, the following stages of our divestment projects are disclosed to the public:

<p><b>Opportunity Disclosure</b></p>	<p>This is when the intention of divestment is made public, and potential interested parties are invited to take part in the bidding process.</p>
<p><b>Beginning of The Non-binding Phase (When Applicable)</b></p>	<p>Optional step, held to identify and select the participants who are really interested in the acquisition and that see greater value in the assets/companies.</p>
<p><b>Beginning of The Binding Phase</b></p>	<p>Step where the selection of the best offer made by the potential interested parties takes place, in order to maximize the value of sales.</p>
<p><b>Granting Exclusivity in The Negotiation (When Applicable)</b></p>	<p>Optional step, which occurs when exclusivity is formally granted to a potential buyer, after the binding phase.</p>
<p><b>Transaction Approval by Senior Management (Executive Board and Board of Directors) and Signing of Agreements</b></p>	<p>Step containing the signing of purchase and sale (or assignment of rights) agreements containing the conditions of the transaction, including the conditions precedent for the closing.</p>
<p><b>Closing of the Transaction</b></p>	<p>Step where the transaction is concluded with the fulfillment of the conditions precedent set forth in the agreement.</p>

From January 1, 2020 through March 12, 2021, we have completed, among others, the following divestitures.

Signing date	Closing date	Main transactions	Transaction nominal value <sup>(1)</sup> (US\$ billion)
10/31/2018	01/14/2020	Full sale of the corporate ownership held by Petrobras (50%) in the company Petrobras Oil & Gas BV ("PO&G BV")	1.530
8/9/2019	5/29/2020	Sale of the entire stake held in seven production fields (onshore and offshore), known as the Macau Complex, in the Potiguar Basin, located in the state of Rio Grande do Norte.	0.191
7/24/2019	7/15/2020	Sale of 100% stake in the Pampo and Enchova Hubs, located in shallow waters of the Campos Basin	0.451 <sup>(2)</sup>
9/30/2019	7/15/2020	Sale of the entire stake in the Ponta do Mel and Redonda onshore fields, located in the state of Rio Grande do Norte	0.007
7/20/2020	7/20/2020	Sale of the remaining stake (10%) held in Transportadora Associada de Gás S.A. (TAG)	0.205 <sup>(3)</sup>
10/11/2019	9/30/2020	Sale of the entire stake in the onshore fields of Lagoa Parda Hub, located in the state of Espírito Santo	0.009
7/24/2019	11/06/2020	Sale of 100% stake in the Baúna field (BM-S-40 concession area), located in shallow waters in the Santos Basin	0.380 <sup>(2)</sup>
3/9/2020	12/09/2020	Sale of the entire stake in the onshore fields of the Tucano Sul Hub, located in the state of Bahia	0.003
11/19/2019	12/23/2020	Full sale of equity interest in Liquigás Distribuidora SA	0.879 <sup>(3)</sup>
11/28/2019	02/05/2021	Sale of our entire stake in the Frade concession, located in the Campos Basin in the north coast of the state of Rio de Janeiro	0.100
10/2/2020	02/05/2021	Sale of the entire stake held in Petrobras Uruguay Distribución S.A. (PUDSA)	0.062
<b>TOTAL</b>			<b>3.817</b>

(1) Considering agreed amounts at the signing of the transaction.

(2) As per the amendment to the Sale and Purchase Agreement.

(3) These operations were traded in R\$. Thus, for purposes of this table, the amounts were converted using the exchange rate (PTAX) of the signing date.

From January 1, 2018 through March 12, 2021, we have signed agreements for transactions that are currently pending closing. Completion of such transactions is subject to compliance with certain contractual and legal conditions precedent.

Signing date	Main transactions	Transaction nominal value <sup>(1)</sup> (US\$ billion)
12/21/2018	Assignment of 10% rights from the Lapa field to Total, in Block BM-S-9. Exercise of the put option for the remainder of our stakes provided for in the contract signed in January 2018 when Total acquired 35% of our stake within the scope of the strategic partnership, taking over field operations	0.05
7/9/2020	Sale of the entire stake in the offshore field of Pescada, Arabaiana and Dentão, located in the state of Rio Grande do Norte	0.002
8/14/2020	Sale of the entire stake in the onshore field of Fazenda Belém and Icapuí, located in the state of Ceará	0.035
8/21/2020	Sale of the entire stake held in eight onshore exploration and production concessions, located in the state of Bahia, jointly known as the Rio Ventura Complex	0.094
8/27/2020	Total assignment of rights in 27 mature onshore fields, located in Espírito Santo, jointly known as the Cricaré Complex	0.155
12/17/2020	Sale of the entire stake held in 14 onshore exploration and production concessions, located in the state of Bahia, jointly known as the Recôncavo Complex	0.250
12/23/2020	Sale of the entire stake held in 12 onshore exploration and production concessions, located in the state of Bahia, jointly known as the Remanso Complex	0.030
01/07/2021	Sale of the entire stake held in Eólica Mangue Seco 1	0.0082 <sup>(2)</sup>
01/07/2021	Sale of the entire stake held in Eólica Mangue Seco 3 and Eólica Mangue Seco 4	0.0172 <sup>(2)</sup>
01/29/2021	Sale of the entire stake in the Peroá and Congoá shallow water fields and in the BM-ES-21 deepwater concession, jointly known as Peroá Complex	0.055
02/24/2021	Sale of the entire stake held in nine onshore fields, located in Bahia, jointly known as the Miranga Complex	0.220
02/26/2021	Sale of the entire stake held in Eólica Mangue Seco 2	0.007
<b>TOTAL</b>		<b>0.923</b>

(1) Agreed amounts at the signing of each transaction, subject to adjustment at closing.

(2) These operations were traded in R\$. Thus, for purposes of this table, the amounts were converted using the exchange rate (PTAX) of the signing date.



## Agreements with CADE

In 2019, we signed two agreements with CADE, which consolidates agreements between the parties related to (i) the execution of divestment of refining assets, and (ii) promoting competition in the natural gas industry in Brazil.

### Refining agreement

With the execution of the refining agreement, among other related commitments, we are committed to divesting approximately 50% of our refining capacity, which represents the full sale of seven refineries (REPAR, REFAP, RLAM, RNEST, REGAP, LUBNOR, REMAN) and a shale industrialization unit (SIX) with their associated logistics.

The agreement also provides that, of the following subgroups (i), (ii) and (iii) below, the companies listed may not be acquired by the same buyer or by companies of the same economic group, as the companies listed in each subgroup are considered competitors with one another: (i) RLAM and RNEST; (ii) REPAR and REFAP; and (iii) REGAP and RLAM. An external agent that we contract, according to specifications to

be established by mutual agreement, will accompany the schedule and compliance with the commitments assumed with CADE.

#### **Natural gas agreement**

The natural gas agreement includes the sale of our shareholding participation in companies of the gas transportation and distribution segments:

- 10% stake in NTS;
- 10% stake in TAG;
- 51% stake in TBG; and
- indirect participation in gas distribution companies, either by selling our 51% stake in Gaspetro, or by selling indirect participation in distribution companies.

In March 2020, we announced the beginning of the divestment processes of our remaining 10% interest in NTS, 51% stake in TBG, and 51% stake in Gaspetro. On July 20, 2020 we sold our remaining 10% stake in TAG.

In our transportation systems, we undertake to specify the maximum injection and withdrawal volumes at each receiving point and delivery area, for further adjustments to the current transportation service contracts, so that transportation companies, under the supervision of the ANP, can offer the remaining capacity to the market, thus enabling other companies to use the remainder of the transportation network. Furthermore, we are committed to other actions to allow greater competitiveness in the natural gas market, such as: (i) negotiating access to outflow and processing assets, (ii) refraining from purchasing new gas volumes from partners/third parties, except in certain situations provided for in the agreement, and (iii) leasing the regasification terminal in the state of Bahia.

The purpose of the agreement is to preserve and protect competitive conditions, aiming to open the Brazilian natural gas market, encouraging new agents to enter this market, as well as suspending administrative procedures established by CADE to investigate our natural gas business.

In addition, we have in our portfolio other projects in their structuring phase, and believe in a strategy for our portfolio management that focuses on core assets, in order to improve our capital allocation, enable debt and capital cost reduction, and ultimately increase value generation for us and our shares.

We have disclosed the teasers, non-binding and binding phases related to the following assets that are currently part of our divestment portfolio.

Phase	Summary scope of main transactions <sup>(1)</sup>
Non-binding	Full sale of equity interest (51%) in Transportadora Brasileira Gasoduto Brasil-Bolívia (TBG)
	Full sale of equity interest (25%) in Transportadora Sulbrasileira de Gás S.A. (TSB)
	Sale of the entire stake held in 28 onshore fields located in the Recôncavo and Tucano Basins, jointly known as the Bahia Terra Cluster
	Sale of the entire stake held in the Albacora field, located in deepwaters, in the Campos Basin
	Sale of the entire stake held in Marlim, Voador, Marlim Leste and Marlim Sul fields, located in deepwaters in the Campos Basin, jointly known as the Marlim Cluster
	Sale of the entire stake held in the Albacora Leste field, located in deepwaters in the Campos Basin
	Sale of the entire stake held in 26 onshore and shallow waters fields located in the Potiguar Basin, jointly known as the Potiguar Cluster
	Sale of the entire stake held in 11 onshore fields located in the Sergipe-Alagoas Basin, jointly known as the Carmópolis Cluster
	Sale of the entire stake held in four onshore fields located in the Espírito Santo Basin, jointly known as the Norte Capixaba Cluster
	Sale of the stake (51%) held in Petrobras Gas S.A. (Gaspetro)
Binding	Sale of refining and associated logistics assets in Brazil: Gabriel Passos Refinery (REGAP) in Minas Gerais, Isaac Sabbá Refinery (REMAN) in Amazonas, Lubricants and Oil Products of the Northeast (LUBNOR) in Ceará, and Schist Industrialization Unit (SIX) in Paraná, as well as their corresponding logistics assets
	Sale of refining and associated logistics assets in Brazil: Abreu e Lima Refinery (RNEST) in Pernambuco, Landulpho Alves (RLAM) in Bahia, and Alberto Pasqualini (REFAP) in Rio Grande do Sul, as well as their corresponding logistics assets
	Sale of the entire stake held in Petrobras Colombia Combustíveis (PECOCO)
	Sale of the remaining stake (10%) held in Nova Transportadora do Sudeste S.A. (NTS)
	Sale of the entire stake held in the Papa-Terra field, located in deepwaters in the Campos Basin
	Sale of the entire stake held in 11 production fields located in shallow waters in the Campos Basin, jointly known as the Garoupa Complex
	Sale of the entire stake (100%) held in the Araucária Nitrogenados S.A. (ANSA)
	Sale of the entire stake (100%) held in the Petrobras Biocombustíveis S.A. (PBIO), including the biodiesel plants.
	Sale of the entire stake held in five electricity generation companies: Brasympe Energia S.A. ("Brasympe"), Energética Suape II S.A. ("Suape II"), Termoelétrica Potiguar S.A. ("TEP"), Companhia Energética Manauara S.A. (CEM) and Brentech Energia S.A. ("Brentech")
	Sale of the entire stake held in four thermal power stations, three of which are fuel oil-based (Bahia 1, Muricy and Arembepe located in Camaçari – BA) and one biofuel-based (Canoas located in Canoas – RS)
	Sale of the entire stake (100%) held in the Nitrogenated Fertilizer Unit III (UFN-III)
	Sale of the entire stake held in the Manati field, a shallow water marine production concession located in the Camamu Basin, in the Bahia state
	Sale of the entire stake held in seven onshore exploration and production concessions, located in the Solimões Basin in the Amazonas state, jointly known as the Polo Uruçu
Sale of the entire stake held in seven onshore and shallow water fields located in the state of Alagoas, jointly called Polo Alagoas	
Sale of the entire stake held in the Atum, Curimã, Espada and Xaréu fields, located in shallowwaters in the Mundaú sub-Basin, State of Ceará, jointly called Polo Ceará	
Sale of the entire stake held in two sets of maritime concessions in the post-salt layer deepwaters, known as the Golfinho Complex and the Camarupim Complex, located in the Espírito Santo Basin	

(1) Information updated as of March 12, 2021.

# External Business Environment

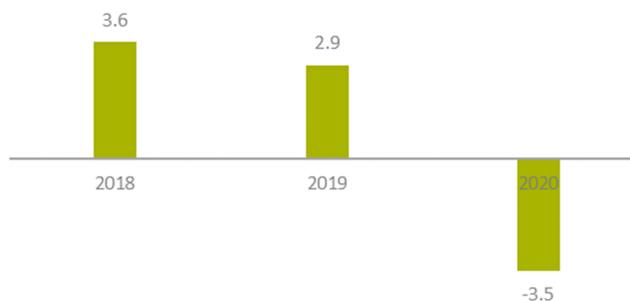
We are subject to external variables that can impact the performance of our business and the way we plan for the future. We describe key variables in 2020 below.

## Global Economy

The performance of the global economy in 2020 was shaped by the impact of the Covid-19 pandemic. The first cases of the disease were reported in December 2019 in China, remaining reasonably restricted to the region until February. In the beginning of March, however, the situation became more serious as the virus spread to several other countries. On March 11, the World Health Organization (WHO) officially recognized Covid-19 as a pandemic. According to WHO data, over 82 million people globally have been infected as of December 31, 2020.

Given this situation, the main measures adopted by countries to try to control the spread of the virus among the population were restrictions on the circulation of people, goods and services, which caused the global activity level to drop sharply and quickly. The Gross Domestic Product (GDP) of the countries in the Organization for Economic Co-operation and Development (OECD) already fell by 2.0% in the first quarter, signaling the worsening of the sanitary crisis, the increase in global uncertainty and the implementation of restrictive measures. Nevertheless, the most severe impact occurred in the second quarter, when these countries' GDP's, in the aggregate, fell by 10.6% (the highest drop since 1962, when the series became available). The expansion of monetary and fiscal measures to mitigate the economic slowdown, together with the lifting of restrictive circulation measures, allowed for a moderate recovery to take place in the second half of the year. The International Monetary Fund (IMF) projects that the global economy will shrink by 3.5% in 2020.

### GDP GLOBAL GROWTH RATE (%)



Source: IMF, 2020

The Covid-19 pandemic had different effects on each of the U.S. and China, the two largest economies in the world. In relation to the Chinese economy, the impacts were concentrated in the first quarter, when the economy contracted by 10%. In the second quarter, China's GDP showed a solid recovery of 11.7%. Confirming the recovery, the National Bureau of Statistics (NBS) reported that China grew 2.3% in 2020. Although the number represented the smallest growth since 1980, China will be one of the few countries whose GDP grew in 2020, according to the NBS. For 2021, the IMF projects a GDP growth of 8.1%.

In the U.S., the economy was affected starting in March, represented in part by the 1.3% contraction during the first quarter. However, the shock took place in the second quarter, when the activity level contracted by 9.0% (31% when annualized), the highest quarterly fall in history. Other indicators show the intensity of the Covid-19 pandemic shock across the U.S. economy. For example, unemployment rates rose to 14.7% in April from 4.4% in March. The IMF projected a 3.4% contraction in the U.S. economy in 2020 and currently projects a 3.1% expansion in 2021.

For 2021, the global economy is expected to recover due to the possibility that a large share of the world population will be vaccinated, which will decrease the need for restrictions on the circulation of people, goods, and services, and will incentivize growth. The IMF projects a 5.5% growth for the year.

## Global Oil & Gas Market

The year 2020 began with high volatility on the supply side. On January 3, 2020, the U.S. carried out an airstrike on the Baghdad airport in Iraq, killing the Iranian top military leader. The attack increased tensions in the international oil market. In response, the volatility of Brent increased, and its price rose to levels near US\$70/bbl during the first week of January.

During the first two months of 2020, the spread of Covid-19 in China led the government to isolate affected cities. The cancellation of commercial flights and the closing of the China-Russia border caused a reduction in the consumption of oil products. As a result of reduction in Chinese demand, oil prices fell to an average of US\$55.57/bbl in February, which represented a drop of 13% in comparison to January.

In early March, the OPEC+ meeting failed to reach the expected outcome of increasing oil production cuts to balance the oil market. The disagreement between the leading members of OPEC+, Saudi Arabia, and Russia, led to the non-renewal of the production cuts in force, thus allowing participating countries to produce without limits after April 1, 2020. In mid-March, the WHO declared the Covid-19 pandemic, which increased the pessimism of the international oil market and led to severe social distancing measures across the world.

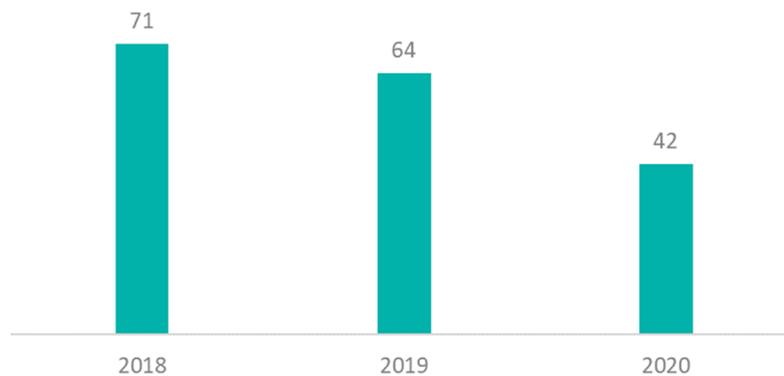
In response to the fall in global oil demand by the end of April, on April 21, 2020 the Brent price reached US\$13.2/bbl, the lowest level seen since 1999. In response to this drop in the Brent price, OPEC+ members reestablished negotiations, reaching an agreement to cut about 10 million barrels per day of oil production.

In May, with the entry into force of the OPEC+ agreement, the price began to recover. A drop in supply from non-OPEC countries and the relaxation of social distancing measures in some countries contributed to this recovery. In addition, an acceleration in demand recovery, especially in China, improved the perception that the market would be closer to rebalancing. As a result, the second quarter ended with a Brent price above US\$40/bbl.

The third quarter maintained the price recovery trend observed in 2Q20. However, despite the high level of compliance with the OPEC+ agreement, there was a negative effect on prices. This negative effect was due primarily to signs of a slowdown in the demand recovery, due mainly to the advance of the Covid-19 pandemic in the U.S. and the second wave of infections in Europe. Nonetheless, the average price of dated Brent ended 3Q20 with a gain of 45.3% compared to 2Q20.

The last quarter of the year began with the oil prices down to levels below US\$40/bbl, in response to new lockdowns in many countries and the uncertainty regarding the approval of an economic recovery plan for the U.S. On the supply side, the recovery of production in Libya and the increase in oil exports from Saudi Arabia also contributed to the drop in price. In November, the outcome of the U.S. election positively impacted the market, reducing the uncertainty in the political field. In December, the start of vaccination against Covid-19 in the United Kingdom and in the U.S. created an optimistic atmosphere for a world economic recovery. The Brent price increased in response, ending the year above US\$50/bbl.

**BRENT – CRUDE OIL PRICE (US\$/BBL)**



Source: Bloomberg, 2020

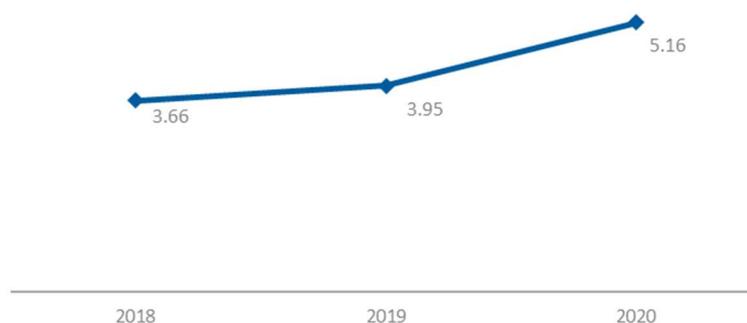
## Brazilian Economy

The Brazilian economy contracted by 4.1% in 2020, according to the Brazilian Institute for Geography and Statistics (“IBGE”), the deepest contraction recorded by official statistics. Despite the strong recession, after April, when the Covid-19 pandemic negatively impacted economic activity, industrial production and retail sales recovered at a quick pace. At the end of the year, the production levels of these activities were higher in comparison to the same period of the previous year. On the other hand, the services sector was the most affected by the Covid-19 pandemic, and at the end of 2020 was still operating below the pre-pandemic level.

From a demand perspective, the observed economic recovery was closely associated to cash transfers made by the Brazilian government to the lowest income share of the population. The social program reached around 67 million people who received at least R\$600 per month from April until August. Between September and December, the amount was decreased to R\$300 per month. The cash transfers boosted private consumption, mainly of semi and non-durable goods, stimulating both industrial production and retail trade.

Also, the depreciation of the Brazilian currency, one of the consequences of the Covid-19 pandemic due to an increase in uncertainty and in the risk perception of international investors, played an important role in the improvement of the competitiveness of Brazilian production, contributing to the above-mentioned recovery. The graph below shows the path of the exchange rate (BRL/US\$) in the last three years:

**EXCHANGE RATE** (BRL/US\$, AVERAGE)



Source: Central Bank of Brazil

In addition to domestic demand, Brazilian exports also showed significant improvement. Besides the depreciation of the national currency, which increased the competitiveness of Brazilian production, the strong recovery of the Chinese economy in March supported Brazilian exports, as China is Brazil's main trade partner, absorbing around 30% of all Brazilian exports, mainly commodities.

This environment allowed an optimistic outlook for 2021 among some entrepreneurs, but there are still many challenges to overcome. The first challenge is related to health measures to control the Covid-19 pandemic, given the accelerated spread of the virus in the last months of 2020. The second is that the unemployment rate is still high. The majority of jobs in the Brazilian economy are in the services sector, in which most companies suffered significant debt increases and will need to improve their financial conditions in the post-Covid-19 period. Finally, inflation accelerated sharply at the end of 2020. If price increases persist in 2021, the interest rate may rise again, limiting economic recovery.

Another crucial component are Brazilian fiscal fundamentals. Public debt reached 89% of the GDP in the end of 2020 due to the actions taken to fight the Covid-19 pandemic. Fiscal fragility may affect risk perception, inflation and interest rates.

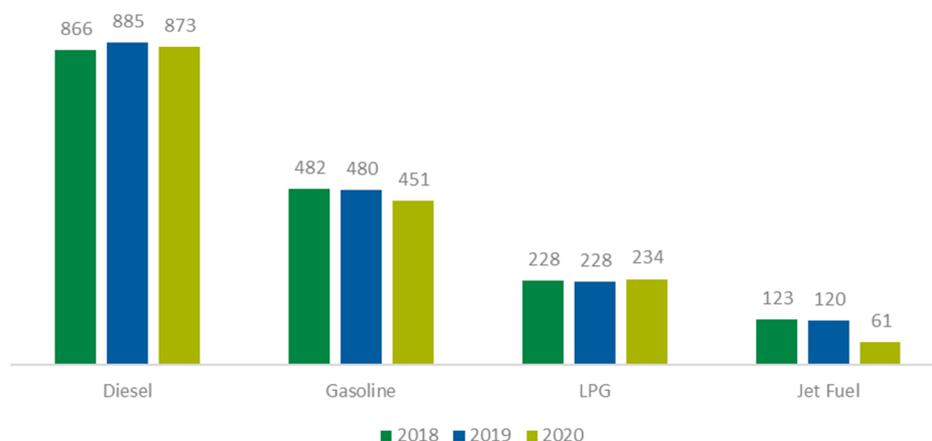
## Brazilian Oil and Gas Market

After two years of recession in 2015 and 2016, the Brazilian economy experienced three years of limited growth, affecting the domestic consumption of oil products.

The Covid-19 pandemic has had, and continues to have, extensive effects on oil products demand, starting in the second quarter of 2020. Strong social distancing measures, personal mobility restrictions, and temporary lockdowns led to an unprecedented fall in oil-related demand for passenger transportation activities. Gasoline and jet fuel were the most severely impacted products. Although goods and cargoes kept moving around the country, the slowdown in economic activity also slightly reduced diesel demand. Despite the overall slowdown, the higher use among residential users strengthened LPG consumption in the same period.

In the following quarters, restriction measures were lifted gradually amid the decrease in the daily number of Covid-19 related cases and deaths. Although strong, the recovery was not enough to bring demand levels to where they were at the end of 2019. The economic activity has not yet recovered from the negative impact of the Covid-19 pandemic.

### SELECTED CONSUMPTION OF FUELS IN BRAZIL (MBBL/D)



Source: Petrobras and ANP, 2020

Despite this extraordinary and impactful event, the long-term trends that are taking place in the Brazilian market for oil products kept their course during 2020.

In specific terms, gasoline demand is expected to diminish due to its substitution by hydrous ethanol, the use of which is motivated by public policies such as *RenovaBio* that induce competitive prices of hydrous ethanol compared to fossil fuel. Additionally, exclusively gasoline-fueled vehicles are being replaced by both flex fuel and electric automobiles.

Moreover, the development of diesel demand is being slowed due to the mandatory increase of the biodiesel percentage in the fuel blend that is delivered to the final consumer. Diesel sales fell just 1.4% in 2020. Temporary basic income policies to mitigate pandemic effects stimulated the demand for necessary goods such as food and beverages, and therefore the freight and diesel demand. In turn, jet fuel demand was the most affected by travel restrictions put into place due to the Covid-19 pandemic. The demand fell by roughly 50% in comparison to 2019.

For at least two decades now, fuel oil has been undergoing a process of substitution by other sources, especially natural gas, and there is still some room for this process to continue in the next years. In the case of thermolectric demand, there were fewer dispatches using fuel oil, negatively affecting its sales. Bunker fuel represents an important part of fuel oil market in Brazil and its demand has increased 6.2% in 2020.

Natural gas demand, according to the Ministry of Mines and Energy inter-annual data until November 2020, has declined by 10%, from an average of 78 million m<sup>3</sup>/d for 2019 to 70 million m<sup>3</sup>/d.

The year 2020 began with an average total consumption of 80 million m<sup>3</sup>/d between January and February, 3% above the figure for the year 2019, of 78 million m<sup>3</sup>/day (Ministry of Mines and Energy). The demand started to reflect the impact of Covid-19 as of March, with a result of 65 million m<sup>3</sup>/day, and hit the lowest point in April, reaching 54 million m<sup>3</sup>/d, which represented a drop of 24 MM m<sup>3</sup>/d relative to the average for 2019. The market has been recovering since then, with November (95 million m<sup>3</sup>/d) surpassing November 2019 (91 million m<sup>3</sup>/d).

## Technology and alternative sources

The Brazilian energy mix (i.e. different types of primary energy sources) is going through transformations, especially in terms of power generation. These transformations are influenced by the development of renewable sources, such as wind and solar photovoltaic power that have become less costly in the recent years.

In terms of motorization, there was a trend towards more efficient-consumption vehicles, influenced by Inovar-Auto and the introduction of the first hybrid flex fuel vehicle manufactured in Brazil. Today, the government program Rota 2030 implies further investments in energy efficiency and vehicles safety, resulting in less taxes for automobile manufacturers.

## Regulation

### 2019

In June 2019, we signed a Cessation Commitment Agreement with CADE, which consolidates the understanding between the parties on the execution of divestment of refining assets in Brazil.

For more information on our agreement with CADE regarding our divestments in refining assets, see “Risks – Risk Factors – Operational Risks” and “Portfolio Management” in this annual report.

In July 2019, we also signed an agreement with CADE which consolidates understandings between the parties on the promotion of competition in the natural gas industry in Brazil.

For more information on our agreement with CADE regarding our divestments in the natural gas industry, see “Risks – Risk Factors – Operational Risks” and “Our Business – Gas and Power – Marketing” in this annual report.

In December 2019, in alignment with the natural gas market opening process, we signed a Commitment Agreement with the ANP, with the intervention of Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG), whereby we promised to (i) waive part of the transport capacity contracted with TBG as a result of the Public Invitation for Contracting of Natural Gas Transport Capacity ANP No. 01/2019, in case it negotiates the reduction of quantities of gas contracted with Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) within the scope of the Bolivian gas import contract signed in 1996, so that this capacity may be offered to third parties; or (ii) if there is no reduction of the volumes contracted with YPFB, to structure, under implementation with the ANP, a business model that allows the specific supply of Bolivian natural gas at the border between Brazil and Bolivia, under conditions agreed between us and ANP. It is worth mentioning that we were successful in negotiating the reduction of the volumes contracted with YPFB (from 30 mmm<sup>3</sup>/day to 20 mmm<sup>3</sup>/day), through the signing of Addendum no. 8 to the Gas Supply Agreement (GSA), signed on March 2020.

## 2020

The gas sector has been experiencing several transformations towards the establishment of a competitive market. The most awaited step, the revision of the regulatory framework, progressed significantly this year.

In December, the Senate approved the New Gas Law, but the text had been altered relative to what had been approved in the Chamber of Deputies, and thus was sent back to the Chamber for the changes to be ratified or rejected.

Apart from legal matters, in 2020 the ANP also put in motion the modification of certain normative acts related to the achievement of a competitive natural gas market, beginning several public consultations and public hearings. These consultations and hearings center around new guidelines brought by Decree No. 9,616/2018 and the removal of restrictions on the provision of the natural gas processing services to interested third parties.

Another advancement that took place in 2020 was the signature to the Integrated Pipeline System and the Integrated Natural Gas Processing System, which is a fundamental step to enable companies to commercialize their produced volumes of natural gas directly to customers.

We, Petrogal Brasil, Repsol Sinopec Brasil and Shell Brasil, partners in the offshore routes in the pre-salt Santos Basin, announced contracts for sharing natural gas pipelines and processing plants. The contracts contemplate the physical interconnection and sharing of the outflow capacities in Routes 1, 2 and 3, resulting in the creation of the Integrated Pipeline System. In addition to the Integrated Pipeline System, the contracts also include specific terms for the construction of Integrated natural gas Processing System, that cover the entry of the companies into our owned processing units located in Caraguatatuba in São Paulo and Cabiúnas and Itaboraí (under construction), both in Rio de Janeiro. With the signing of these contracts, each company will be able to outflow their gas produced in the Santos Basin pre-salt fields through any of the export routes for processing in our owned plants.

The signatures to the Integrated Pipeline System and Integrated natural gas Processing System were commitments included in the Petrobras TCC with CADE, signed in 2019.

For more information on our divestment process, see “Portfolio Management”.

# Our Responses to the Covid-19 Pandemic

## Employee's health and society

The outbreak of the Covid-19 pandemic and the measures necessary to contain the virus transformed 2020 into an unusual year. In line with our commitment to health and safety, we are engaged in the struggle to mitigate the effects of this pandemic, the largest in the last 100 years.

Per the pandemic Decree issued by the World Health Organization, we have internally established an Organizational Response Structure ("EOR"), based on the Incident Command System ("ICS") management tool. This provisional structure, composed of our internal professionals, guided, in a uniform manner, all our actions to prevent and combat the advance of Covid-19 and mitigate its consequences on all possible fronts.

We acted quickly and adopted a series of measures to preserve the health of our employees in the operational and administrative areas. These initiatives are in line with the recommendations from the World Health Organization and the Ministry of Health and aim to contribute to efforts to mitigate the risks of the disease. Preventative measures were adopted, such as:

(i) extensive testing, including carrying out more than 400,000 tests in our workforce by December 2020; (ii) pre-shipment and preshift health monitoring, reinforcement in hygiene measures, distance and mandatory mask use at the units; (iii) reducing the number of personnel aboard platforms, rigs and other vessels to what is necessary for the safe operation of each unit; (iv) intensification of the inspection of compliance with the prevention rules in all operational units at sea or on land, with audits at all units and immediate correction of any deviations; (v) extension of remote work for all activities that can be carried out remotely until March 31, 2021; (vi) awareness and orientation actions for employees and contractors about individual care; and (vii) health monitoring and access to telemedicine services.

All employees and contractors were instructed to report any symptoms immediately. We provide specific communication channels (24-hour call center and e-mail), as well as an online form for self-reporting of suspected Covid-19 symptoms. We monitor suspected cases and their contacts from the first report, taking all preventative measures to avoid contagion, guiding employees and contractors and applying RT-PCR (Protein Transcriptase Reverse Chain Reaction) tests when indicated by the health team. We also provide our employees with medical service, including telemedicine 24 hours a day, seven days a week.

For the offshore sector, considering the special containment characteristic, we have adopted even more stringent measures, always maintaining constant contact with regulatory bodies, service companies and other entities in this sector to align practices. We implemented monitored home isolation and screening by health professionals in pre-boarding platforms, with the suspension of boarding for those who show any symptoms in the previous 14 days, as well as carrying out diagnostic tests before boarding. We assess, by means of a dedicated health team, all employees and contractors with symptoms on board and provide for the immediate disembarkation of suspected cases and their contacts.

In order to ensure that the best practices are also adopted by our suppliers, we follow the measures and planning of the companies responsible for chartered units and the companies providing services.

In 2020, we used existing communication channels in the communities neighboring our operations to address issues such as periodic monitoring of the status of Covid-19, guidelines from the federal government, and hygiene tips. In virtual meetings, we publicized these solidarity campaigns and dealt with topics such as mental health during Covid-19, with the participation of our health professionals.

The Petrobras Socio-Environmental Program projects also acted promptly in response to the Covid-19 pandemic, with subsequent measures to mitigate health risks, adopting a series of measures to safeguard the health of technical teams and beneficiaries. During this period, it was possible to count on the support network of socio-environmental projects to raise funds for the communities surrounding our operations. In total, the network raised US\$55,233.82, an amount that allowed for the donation of 4,036 basic food baskets. In addition, more than 400,000 masks were produced for distribution.

We also made financial contributions to projects to fight Covid-19, donating fuel, Covid-19 tests, Individual Protection Equipment and hygiene items, for a total of US\$4,542,195.22.

Hours from the academic supercomputers SDumont, at LNCC, and OGBON, at SENAI/CIMATEC were devoted to research related to Covid-19 through the Stanford folding@home project. Both LNCC and SENAI/CIMATEC are our academic partners. We invest in the expansion and installation of supercomputers and we are entitled to use part of the infrastructure. The reports showed a total of 19,248 OGBON and 459,772.50 SDumont hours dedicated to the folding@home project, that is, a total of 479,020.50 hours.

## Resilience and liquidity preservation

In view of the impact of Covid-19 on the energy market, the uncertainties regarding the oil price and demand and the financing conditions of the capital market, we have implemented several financial measures to guarantee liquidity. One such measure was the draw down of revolving credit lines, amounting to US\$8 billion, as well as other lines in the domestic banking market, in the total amount of US\$698 million in the first quarter of 2020. In the third quarter of 2020, we repaid US\$7.6 billion of revolving credit lines.

We also adopted a series of measures to reduce disbursements and preserve cash as a measure to protect our financial health. These measures include optimizing oil production, postponing cash disbursements and reducing costs. We mothballed our platforms that operate in shallow water fields, with higher lifting costs per barrel, and adjusted the processing of our refineries in line with fuel demand. We reduced costs with well interventions, optimized production logistics, and postponed significant new hires.

Excluding the exchange rate effect, we have achieved a reduction of US\$1 billion compared to our operating expenses budget, and a US\$2 billion reduction in the investments scheduled for 2020, resulting in a total investment of US\$8.1 billion.

Our expenses in corporate areas were reduced by 15% compared with 2019. For more information on the Covid-19 pandemic impacts on our operations and results, see “Our Business” and “Operating and Financial Review and Prospects” in this annual report.

## Scientific journey

Led by our R&D Center (CENPES), we also worked to combat and mitigate the effects caused by Covid-19.

Our scientists used their multidisciplinary expertise, including knowledge in agile methodologies, digital technologies, prototyping, microbiology, and many other specialties, to propose ways to fight the pandemic. All actions were aimed at preventing, diagnosing and curing Covid-19, both within our company and in society.

We transformed our technical capacity into benefits for society on several fronts, making use of partnerships that allowed us to expand and accelerate our actions. Our energy was directed towards quick and viable solutions in facing Covid-19.

The main actions of the projects developed or supported were:

- **Acceleration of lung ventilator production through financial support for:** (i) three projects supported with US\$19,245.57 each; and (ii) one USP (São Paulo University) project supported with US\$211,701.31, for the production of the first batch of 135 ventilators for donation to state-owned hospitals, of which 50 have already been produced and donated.
- **Maintenance of pulmonary ventilators:** Support of US\$190,307.45 for the SENAI initiative with the recovery of more than 2,400 unused ventilators in hospitals and more than 68 ventilators repaired with our own resources in 2020.

- **Artificial Intelligence for diagnostic imaging:** (i) diagnostic imaging (tomography and X-ray) using artificial intelligence in partnership with USP's Hospital das Clínicas to identify the effects caused by Covid-19; (ii) 24,000 tests analyzed from 49 registered hospitals; and (iii) reduction from 30% to 10% of false negatives throughout Brazil, leading to adequate treatment of Covid-19 and reduction of contagion.
- **High performance computers supporting the Folding@Home project:** provision of computational capacity for sequencing the virus genome, with our partners in the Libra Consortium. Computational capacity equivalent to 15,000 next generation notebooks aimed at studies to combat Covid-19.
- **New protocol to increase sample evaluation capacity in laboratories:** (i) increase in the availability of RT-PCR tests through the Disclosure of Test Protocol in partnership with SENAI-Firjan, with the multiplex and pool method; (ii) 100% productivity gain in the analysis of the collected samples; and (iii) savings of 43% in the reagents used in analysis;
- **Adapting facilities for safer work:** (i) implementation of an intelligent video analytics system for face mask wearing detection and crowd monitoring at our facilities, minimizing the risk of infection of teams in face-to-face work; (ii) implementation of rapid testing for Covid-19, with 14-day cycle retesting and Rapid Antigen testing counterproof for all positive cases; (iii) implementation of mandatory RT-PCR testing of all offshore workers immediately before boarding; (iv) Distribution of kits with masks for our employees; (v) daily transmission of Covid-19 guidance and prevention messages through the internal sound system; (vi) installation of instructional and guidance signs according to internal technical notes for safe return; and (vii) installation of hand sanitizer dispensers and supply points, distributed in strategic points of the buildings.

## Recognition of our participation

Our partnerships with Senai and Hospital das Clínicas at USP to fight Covid-19 were recognized with national awards, confirming that the collective effort between institutions has been fundamental in fighting Covid-19. Senai's initiative to recover lung ventilators, supported by us and other companies, received in December 2020, the Social Entrepreneur of the Year Award from Folha de São Paulo and from the Schwab Foundation (linked to the World Economic Forum).

Another recognized project was the artificial intelligence platform RadVid19, developed by USP, which detects Covid-19 in radiography and computed tomography exams. This initiative, a partnership between us and other institutions, won, in December 2020, the Abril / Dasa Award as the best project in the Diagnostic Medicine category.



## Strategic Plan

# Strategic Plan

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## 2021-2025 Strategic Plan

Our Strategic Plan consists of the continuous evaluation of the business environment and the implementation of our strategies, allowing for adjustments to be made in a more efficient way. The Plan is focused on oil and natural gas exploration and production, notably in the Brazilian pre-salt area, which is one of our greatest strengths and sources of value creation.

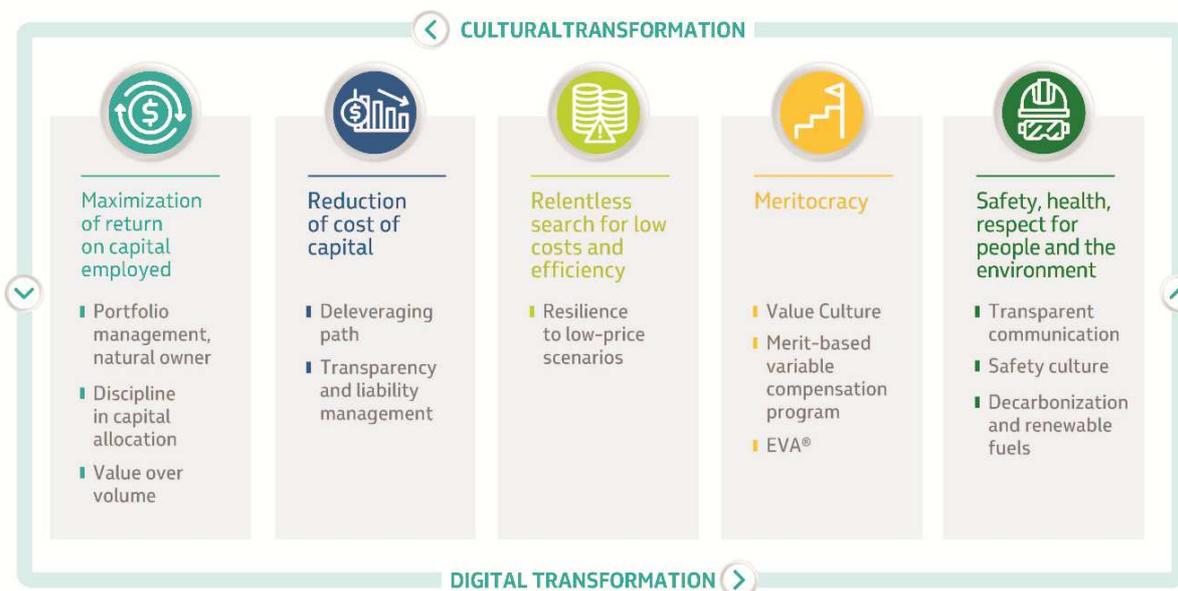
In addition, our Board of Directors has scheduled a presentation in its 2021 agenda regarding longer-term goals beyond this five-year period.

We continue to deliver competitive, low-carbon energy to the world, striving to contribute to a prosperous and sustainable future. Digital transformation has gained strength as an important instrument for adding value to our business in a competitive environment. Another highlight of our Strategic Plan is adopting economic value added (EVA<sup>®</sup>, referred to herein as “EVA”) as a management tool for our company.

Our Strategic Plan maintains the five pillars that support the implementation of our set of strategies and two themes common to the strategic pillars - cultural and digital transformation:

- Maximization of the return on capital employed;
- Reduction of the cost of capital;
- Relentless search for low costs and efficiency;
- Meritocracy; and
- Safety, health and respect for people and the environment.

## STRATEGIC PILLARS SUPPORT OUR TRANSFORMATIONAL AGENDA



Our Strategic Plan reaffirms our vision of "Being the best energy company in generating shareholder value, focusing on oil and gas and with safety, respect for people and the environment", which aims to eliminate the performance gap that separates us from the best global oil and gas companies (Mind the Gap concept) and presents the model of double resilience: economic, resilient to low oil price scenarios, and environmental, focusing on low carbon.

Our business strategies ensure that our resources are employed at the right time and in the right assets to ensure the highest possible return on invested capital. These strategies guide our business decisions and dictate the path through which we aim to achieve our objectives.

Our Strategic Plan presents four top metrics that will directly impact the compensation not only of executives, but of all company employees in 2021. Two of them are related to sustainability (ESG):

- Intensity of greenhouse gas emissions (GHG);
- Leaked volume of oil and oil products;
- Gross Debt of US\$67 billion in 2021;
- Consolidated EVA® delta of US\$1.6 billion.

TARGETS 2021

AMBITION: Zero fatalities and Zero leakage



1) Intensity of Greenhouse Gas emissions  
 2) VAZO: Spilled volume of oil and oil products  
 3) Total Recordable Injuries

We maintain the total recordable injuries per million man-hours indicator (“TRI”) as the top metric for 2021, but adjust the target to below 0.7, reinforcing our commitment to life. We continue with our zero fatalities ambition and have added our ambition of zero leakage.

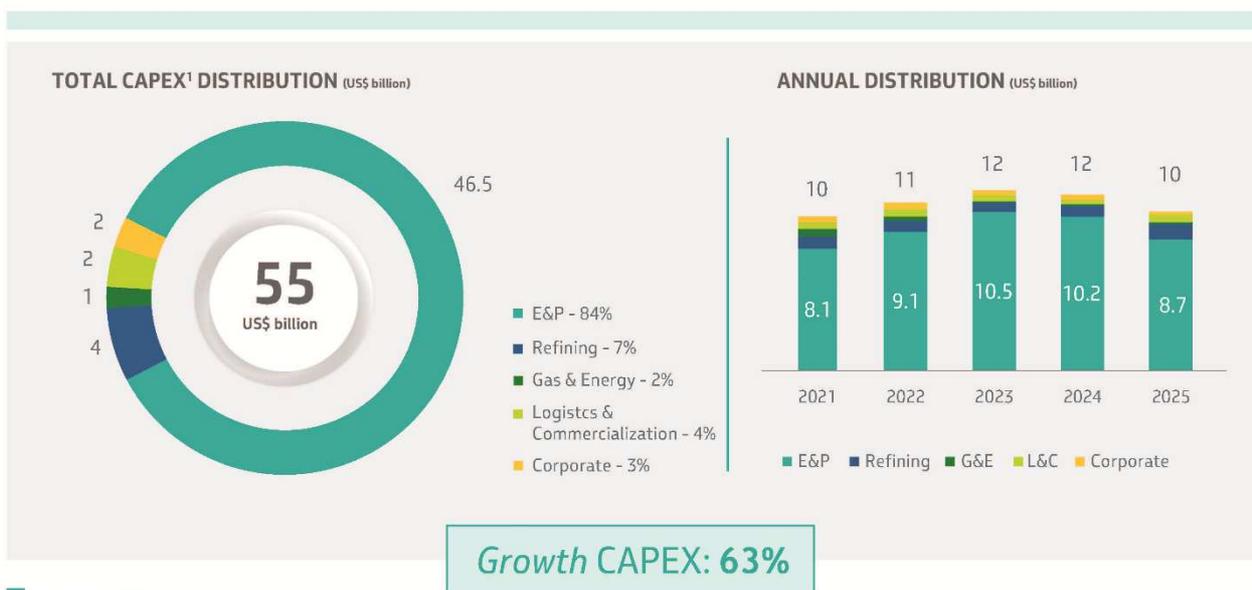
Debt reduction and financial deleveraging will continue to be a priority, with the operating cash generation and divestments fundamental for these purposes. From January 2019 to September 2020, even with the impacts of the Covid-19 pandemic and depressed oil prices in 2020, we have been able to reduce our Gross Debt by US\$31 billion and maintain our target of US\$60 billion by 2022.

Our strategies were adjusted by defining our actions by strategic segment, in view of our focus on the core business and shareholders value generation, that give visibility to issues that were relevant in 2020 for our future, such as: (i) transparency and focus on sustainability (ESG), especially regarding the decarbonization of operations; (ii) strengthening of logistics activities, marketing and sales; (iii) search for more efficient and sustainable Refining - BioRefining and (iv) strengthening of our management model.

	<p><b>Exploration and Production</b></p>	<ul style="list-style-type: none"> <li>_Maximize portfolio value, focusing on deep and ultra-deepwaters, seeking operational efficiency, recovery factor optimization, partnerships and low greenhouse gas intensity; and</li> <li>_Grow sustained by world-class oil and gas assets in deep and ultra-deepwaters.</li> </ul>
	<p><b>Gas and Energy</b></p>	<ul style="list-style-type: none"> <li>_Act competitively in the trading of our own gas;</li> <li>_Optimize the thermoelectric portfolio focusing on self-consumption and trading of its own gas; and</li> <li>_Withdraw from gas distribution and transport completely.</li> </ul>
	<p><b>Refining</b></p>	<ul style="list-style-type: none"> <li>_Operate competitively in refining activities, with assets focused on the proximity of the oil supply and of the consumer market;</li> <li>_Withdraw from fertilizers, LPG and biodiesel businesses completely; and</li> <li>_Add value to the refining park, with more efficient processes and new BioRefining products, such as Biokerosene and Renewable Diesel Fuel, moving towards a low carbon market.</li> </ul>
	<p><b>Logistics &amp; Trade</b></p>	<ul style="list-style-type: none"> <li>_Provide and manage integrated logistics solutions, ensuring an optimal allocation of assets, inputs, and products, with competitive costs, operation sustainability, reliability and security; and</li> <li>_Operate in the oil and oil product trade, in a competitive environment, generating value for the company and its customers, through the integration of our production chain and subsidiaries.</li> </ul>
	<p><b>Energy Transition</b></p>	<ul style="list-style-type: none"> <li>_Undertake research aimed at operating, in the long term, in petrochemical and renewable energy businesses with a focus on wind and solar power in Brazil.</li> </ul>
	<p><b>Competitiveness</b></p>	<ul style="list-style-type: none"> <li>_Transform us digitally by delivering solutions to challenges, empowering our employees, generating value, and increasing operational safety;</li> <li>_Develop critical skills and a high-performance culture to meet the new company challenges using economic value added as a management tool;</li> <li>_Constantly pursue a competitive and efficient cost and investment structure with a high safety standard, health and respect for the environment; and</li> <li>_Strengthen our credibility and reputation.</li> </ul>

Our projected capital expenditures for the 2021-2025 period are US\$55 billion, of which 84%, or US\$46 billion, is allocated to the E&P segment. Moreover, 70% of the E&P allocation, or US\$32 billion, is allocated to pre-salt assets. These CAPEX allocations are consistent with our strategic positioning, which focuses on maximizing the value of assets in deep and ultra-deepwaters through innovation guided by our highly-skilled workforce.

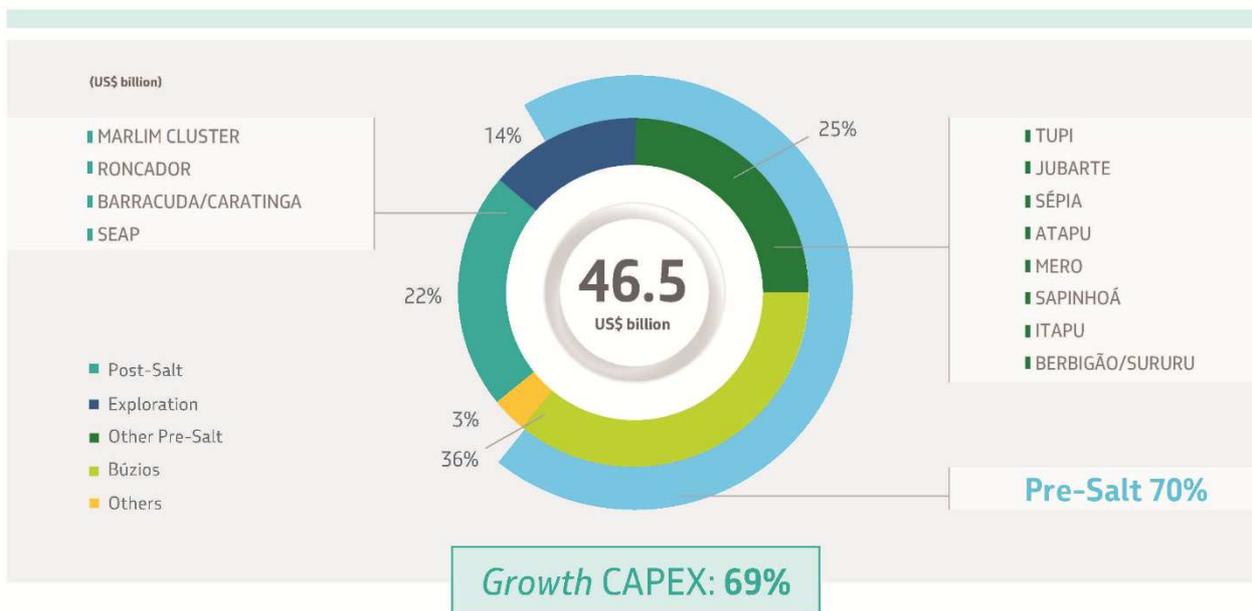
INVESTMENTS 2021-2025



The amount of CAPEX was adjusted from US\$75 billion (last plan) to US\$55 billion (current plan), of which US\$35 billion corresponds to growth investments and US\$20 billion to sustaining investments.

The main drivers of the reduction were the depreciation of the Brazilian real currency against the U.S. dollar; the optimization of exploratory investments; keeping the commitments with the ANP that were already agreed upon; avoiding CAPEX associated with divestment; and the revision of the investment portfolio - postponed or canceled projects that were no longer favorable given current oil prices.

E&P INVESTMENTS 2021—2025

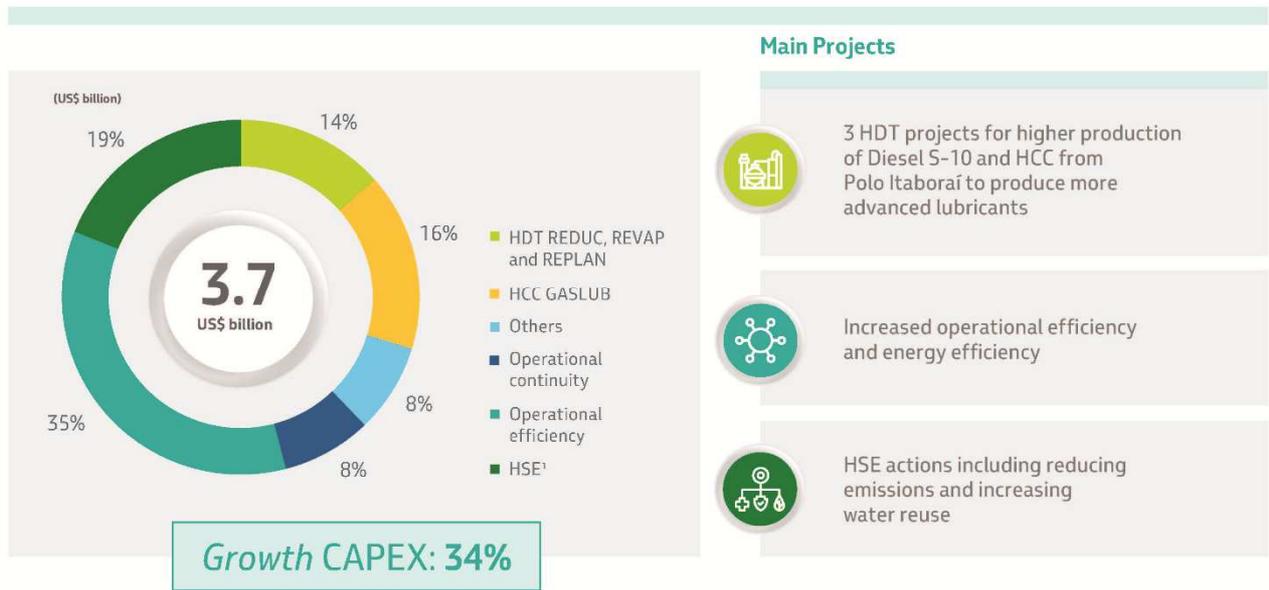


Our Strategic Plan presents an increasing E&P portfolio focusing on deep and ultra-deepwater activities and a growth strategy based on world-class assets, where the lifting cost is lower, providing higher returns. Thus, we expect 70% of our investments in the segment for the 2021-2025 period will be directed to pre-salt assets and projects, in particular on the Búzios field, which is expected to be allocated 36% of the total investment planned for the E&P segment.

In the 2021-2025 period, our estimated CAPEX for the Campos Basin renovation plan is US\$13 billion. Approximately 10% of this US\$13 billion corresponds to investments in exploration in the 14 blocks that were acquired from 2017 to 2019 from the ANP, in the Campos Basin. We expect to drill four exploratory wells in the Campos Basin in 2021, all with pre-salt objectives.

Our Strategic Plan contemplates relevant investments in other basins outside the Southeast in deep and ultra-deepwaters, all within Brazil. We will invest approximately US\$1 billion in the Equatorial Margin, where there is potential exploration of this pathway front. We will also continue with the Sergipe deep-water development project, where we expect investments of around US\$2 billion.

REFINING INVESTMENTS 2021-2025

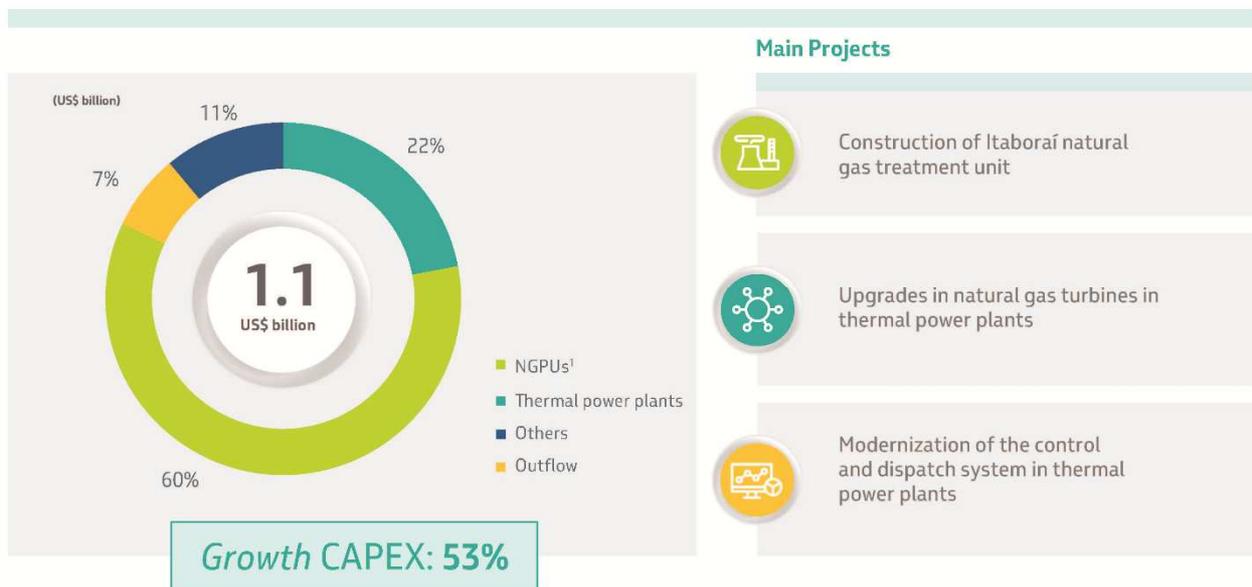


1) Carbon mitigation project and water reuse

In the refining segment, our strategy is to focus on assets near the largest oil supply and the largest Brazilian consumer market. We intend to sell part of our current refining units and to invest in upgrading the remaining refineries (increasing S-10 diesel share, biorefining, efficiency and lower emissions).

We have 13 refineries located in various regions of the country and a shale processing unit in Paraná. We will keep five refineries concentrated in the Southeast. For the next five years, we estimate a CAPEX of US\$3.7 billion, 34% for the development of new projects, for the refineries that will remain in our portfolio.

GAS AND POWER INVESTMENTS 2021-2025



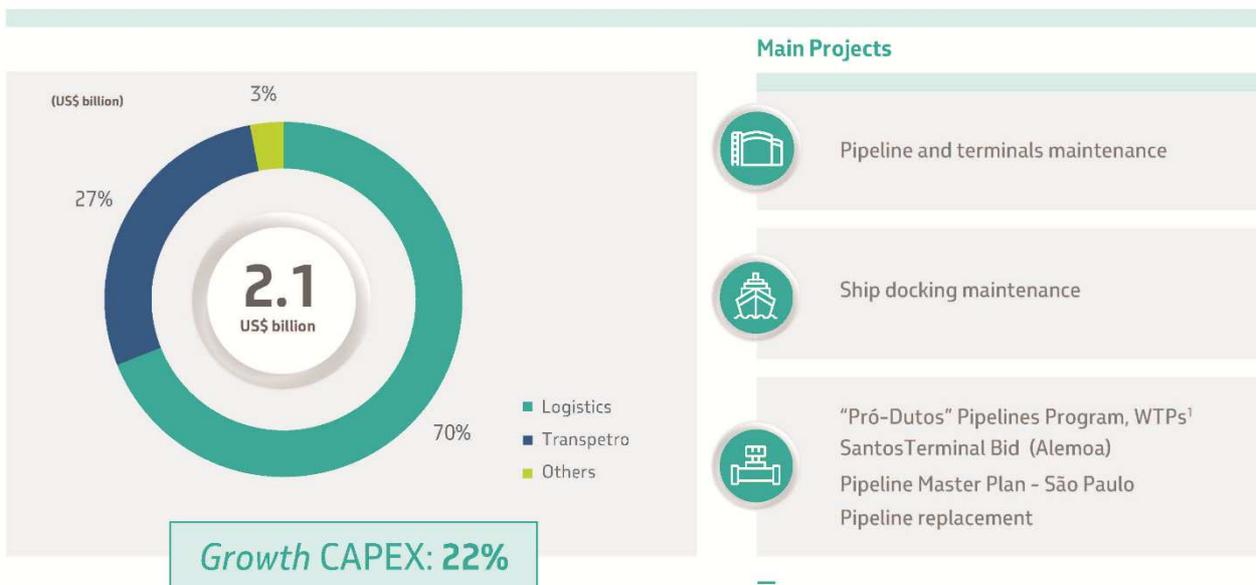
Main Projects

- Construction of Itaboraí natural gas treatment unit
- Upgrades in natural gas turbines in thermal power plants
- Modernization of the control and dispatch system in thermal power plants

<sup>1</sup>) Natural Gas Processing Units

In the Gas and Power segment, our investments are focused on Route 3 and natural gas processing unit to enable natural gas outflow from pre-salt production. The Route 3 Project is our third pre-salt gas route, which will increase the amount of gas exported and the processing capacity from the pre-salt assets. It is expected to start operating between 4Q21 and 1Q22.

MARKETING, SALES & LOGISTICS INVESTMENTS 2021-2025



Main Projects

- Pipeline and terminals maintenance
- Ship docking maintenance
- “Pró-Dutos” Pipelines Program, WTPs<sup>1</sup> Santos Terminal Bid (Alemoa)  
Pipeline Master Plan - São Paulo  
Pipeline replacement

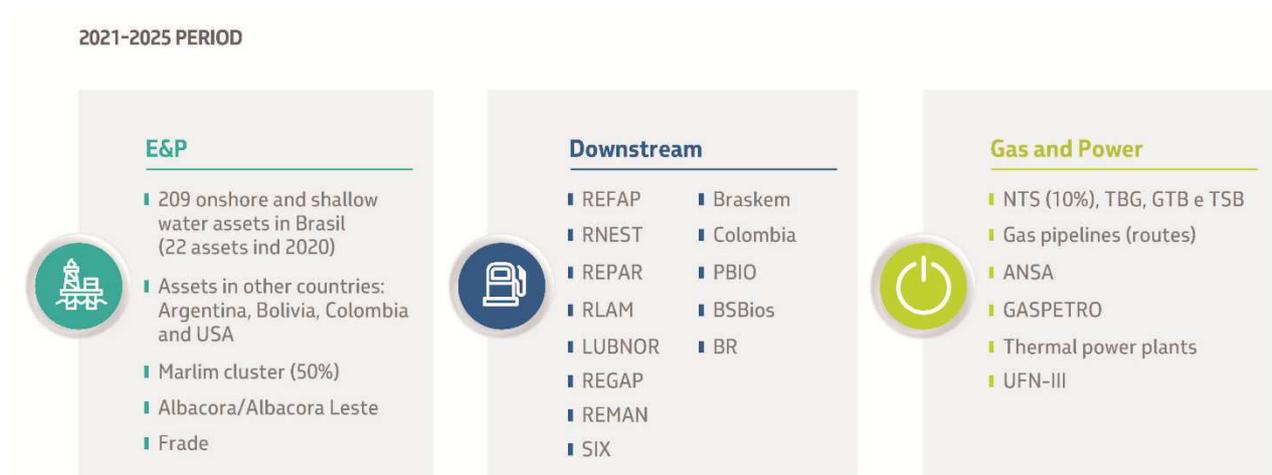
<sup>1</sup>) Wastewater treatment plant

In logistics, we are concluding the São Paulo duct master plan projects, which are removing oil, LPG and naphtha pipes from high-populated areas in São Paulo. Also, the new Trading and Logistics Executive Board created in 2020 is focusing on improving efficiency, security, and logistical availability.

We continue to pursue deleveraging by means of cash generation and divestment. In 2021, our major cash needs are expected to meet our budgeted Capital Expenditures for the year, amounting to US\$ 10 billion, and to make principal and interest payments of US\$6 billion on our debt.

The divestments forecast in our Strategic Plan are between US\$25-35 billion, with the highest concentration expected in the years 2021 and 2022. In addition to divestments already announced by us in our last strategic plan, we will also divest from some assets including Marlim, Albacora, BR, and Braskem, among others, in line with our portfolio review. The implementation of the potential sale of such assets may depend on market and strategic conditions.

Our principal planned divestitures in the 2021-2025 period are presented below.



### Production of Oil, NGL and Natural Gas

The oil and gas production curve estimated in our Strategic Plan indicates a continuous growth path. During the 2021-2025 period, 13 new production systems are expected to begin operation, all of which are allocated to deepwater or ultra-deepwater projects.

As we did last year, we present a commercial production vision showing the financial impact of production on our results, deducting from our natural gas production the volumes of gas reinjected into the reservoirs, consumed in E&P facilities and burned in production processes.

The production curve estimated in our Strategic Plan is presented below.

ESTIMATED OIL AND GAS PRODUCTION<sup>1</sup>

(MMboed)



<sup>1</sup> Variation of +/- 4% for the 2021 production  
<sup>2</sup> Post-divestments



- Production of non-commercial gas
- Production of commercial natural gas
- Oil production
- Total production pre-divestments
- Total production post-divestments

The oil production for 2021 reflects the impacts related to the Covid-19 pandemic and the divestments that occurred in 2020. We estimate a variation of +/-4% for the 2021 production.

We believe this curve is sustained in a portfolio that generates more value and has greater resilience to low oil prices. In the year 2021, for example, we expect a production of 2.75 million boed before divestments and 2.72 million boed after divestments that have yet to take place this year and next year.

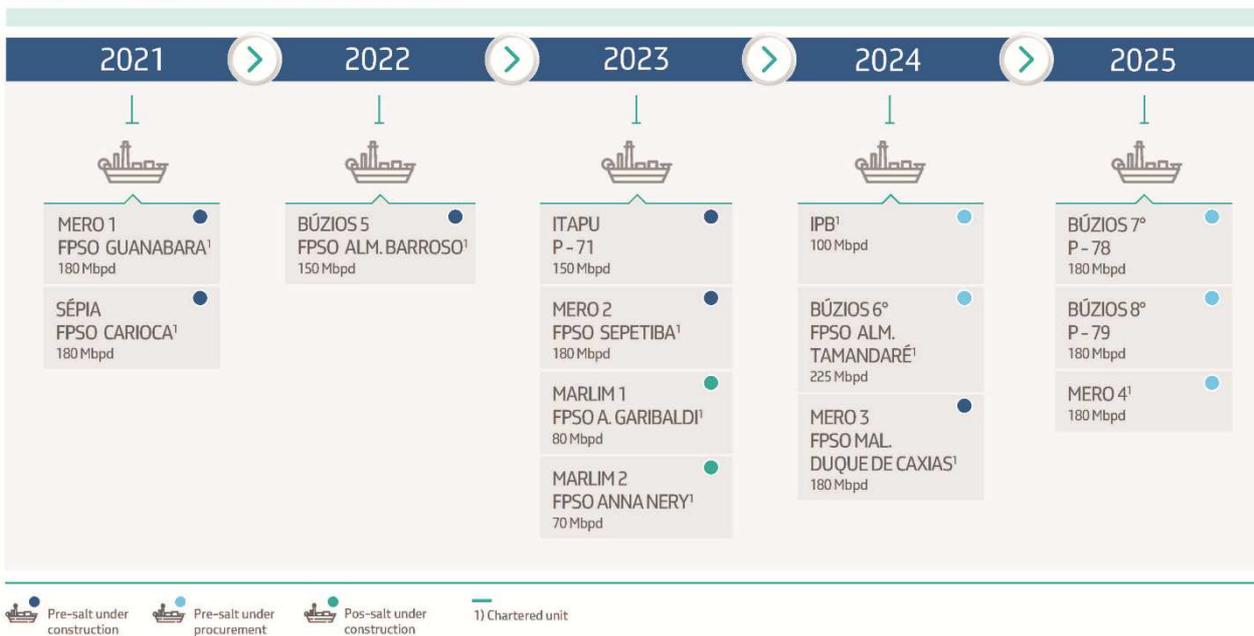
In 2025, we expect a total production of 3.3 million boed before divestments and predict 2.7 million boed after divestments. This difference of 600 thousand barrels/day is due to divestments in onshore assets, shallow water assets, as well as in the *Albacora*, *Albacora Leste* and *Polo Marlim* fields.

We also expect an increase in the share of pre-salt production, reaching 80% in 2025, compared to 67% of our total production in 2020.

Below we present the schedule of our new units up until 2025. We believe we are the leader in investment in these kind of projects in the world. In the next five years, we will have 13 new FPSOs that will come into operation, 11 in pre-salt and two in post-salt. Eight of them are already under construction, including seven under construction in China. In 2021, we will start the operation of two of these units - *Sépia* and *Mero 1*.

FPSO PROJECTS

6 fields and 13 new FPSOs from 2021 to 2025



### Crude Oil Price and Exchange Rate

Future calculations have been carried out assuming an average Brent Crude Oil price of US\$45/bbl in 2021-22 and US\$50/bbl until 2025 and in the long-term. We assume an average *real*/U.S. Dollar exchange rate of R\$5.50, R\$4.69, R\$4.46, R\$4.28 and R\$4.07, to US\$1.00 for the 2021-2025 period, for each year respectively.

### Financing

We expect a strong free cash flow generation to be the result of higher expected efficiency, greater cost control and financial resources obtained due to active portfolio management. This will allow a gradual reduction in Gross Debt, with a consequent reduction in interest expenses and an increase in estimated dividend distribution amounts through our Dividend Policy.

In addition, by anticipating cash flow through divestments of assets, we expect to make our investments, without the need for new net fundraising in our Strategic Plan horizon.

### Low Carbon and Sustainability Commitments

We reinforce our commitment to the environment and the use of new technologies for decarbonization, which involve, for example, the reduction of natural gas flaring, CO<sub>2</sub> reinjection and energy efficiency gains in our operations. We have created an executive management area focused on climate change, linked to the Institutional Relations and Sustainability Office, and we aim to remain in the first quartile of the oil and gas offshore industry in relation to low carbon emissions.

To this end, we have reviewed our ten commitments to sustainability<sup>1</sup>:

- 1. 25% reduction in absolute operational emissions by 2030.
- 2. Zero routine flaring by 2030, in accordance to the zero routine flaring initiative of the World Bank.
- 3. 40 million tons CO<sub>2</sub> reinjection by 2025 in Carbon Capture, Utilization and Storage (“CCUS”) projects.
- 4. 32% reduction in carbon intensity in the upstream segment by 2025 (15 kg CO<sub>2</sub>e/boe, maintained until 2030).
- 5. 40% reduction in methane emission intensity in the upstream segment by 2025.
- 6. 16% reduction in carbon intensity in refining segment by 2025, expanding to 30% by 2030 (30 kg CO<sub>2</sub>e/CWT).
- 7. 50% reduction in freshwater capture in our operations by 2030.
- 8. Zero increase in residues generation by 2025.
- 9. 100% of our facilities with biodiversity action plan by 2025.
- 10. Investments in socio-environmental projects, human rights programs and community relationships.

We also intend to invest approximately US\$1 billion over the next five years related to our low carbon and sustainability commitments which will be distributed through initiatives in innovation in our operations, biorefining (Renewable diesel, BioQAV, bioproducts and lubricants) and the development of competencies for the future through R&D in modern renewables, petrochemical and low carbon products and compensatory projects.

In addition to the sustainability commitments, we approved five commitments in social responsibility:

<sup>1</sup> Carbon commitments related to 2015 base. Other commitments based on 2018.

- Human rights training program for 100% of employees;
- Actions to promote diversity, providing an inclusive environment;
- Human rights due diligence in 100% of our operations;
- Socioeconomic diagnosis of communities;
- Measurement and disclosure of the social return of at least 50% of the socio-environmental projects.

Completing our ESG agenda, governance issues remain one of our priorities. Throughout 2020, we made continuous efforts and presented a strong development in this area by approving our Code of Ethical Conduct and the Guide to Ethical Conduct for Suppliers, which contributed to our return to the Partnering Against Corruption Initiative (PACI) of the World Economic Forum (WEF). Additionally, we present our governance commitments:

- A governance model that allows the balance between efficiency and control; and
- Integrity and transparency, zero tolerance for fraud and corruption.

With the execution of our Strategic Plan, we reaffirm our commitment to becoming a more financially robust company, with low indebtedness and cost of capital, focused on world-class oil and gas assets and value creation, always acting in an ethical and transparent manner, with safety in our operations and respect for people and the environment.

# Digital Transformation

We believe that it is important to be prepared for a competitive environment that is increasingly influenced by digital technologies. Our “Digital Transformation and Innovation Executive Office”, created in September 2019, continues to develop a consistent and synergic pathway, aligned with our strategic pillars.

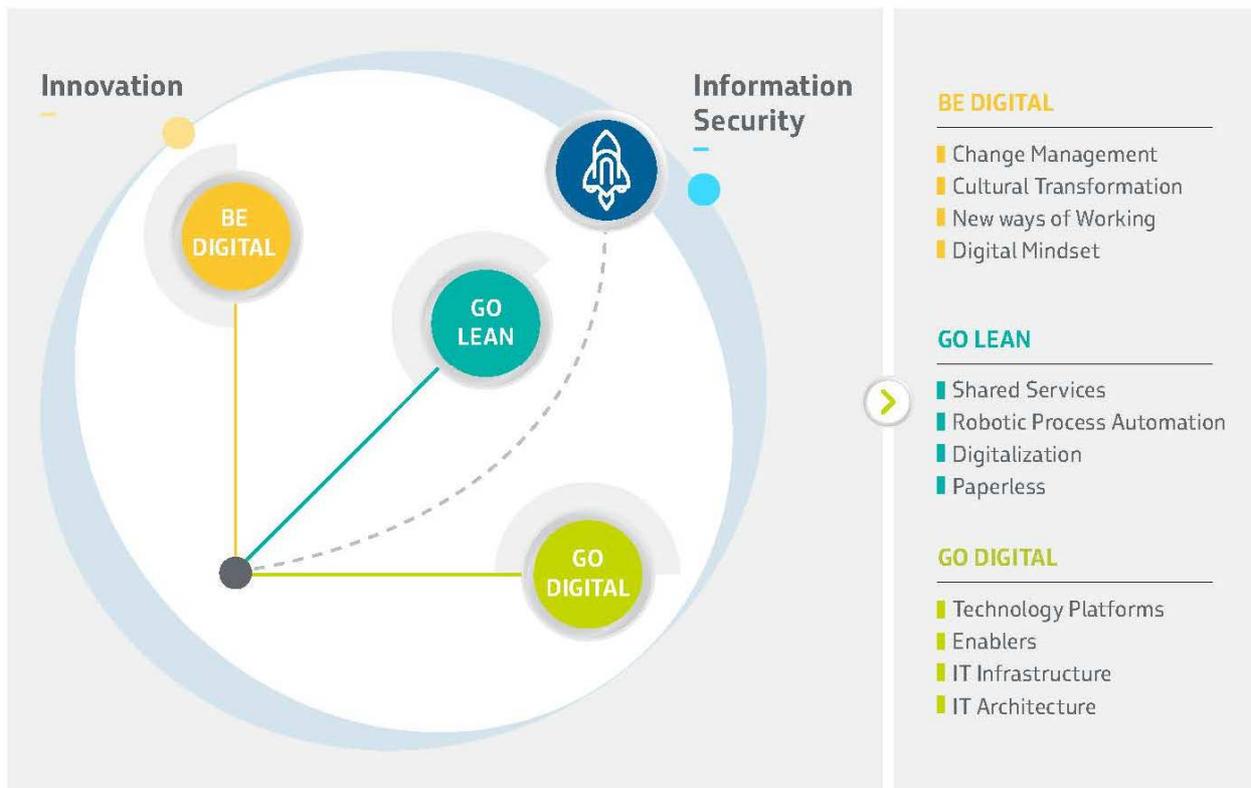
Our digital transformation and innovation strategy is anchored in three fundamental initiatives to pursue the exponential trajectory of generating value:

**Go Digital:** Focuses on technology platforms boosting digital evolution.

**Be Digital:** Focuses on digital and agile innovation – practices, mindset and cultural change.

**Go Lean:** Focuses on optimizing and automating processes.

## PETROBRAS STRATEGY FOR DIGITAL TRANSFORMATION AND INNOVATION



## Go Digital

The Go Digital strategy aims to put technology at the core of every one of our businesses and, therefore, create value throughout our value chain. Through the adoption of agile methodology at scale and our cloud computing technology, we are seeking innovation as well as a modern IT architecture that enables us to extract value from our data. This opens up the path to digital solutions with integrated data platforms and up-to-date technologies, such as artificial intelligence.

In 2020, we have completed:

- the implementation of the Atlas and Fênix supercomputers, the largest and most environmentally friendly supercomputers in Latin America, in a project that increased our high performance computing capacity by 520%, with nine new HPC clusters in two years. We have also begun deployment of DRAGÃO, our new supercomputer that surpasses both Atlas and Fênix combined. DRAGÃO alone has computational power equivalent to four million modern smartphones. With new supercomputers and intense use of public cloud technology, we expect to grow our HPC capacity by 1,600% in 2021 and by 4,000% by 2023, in comparison to 2018. Our high performance computing investments are essential to support Upstream strategic programs, such as EXP100, PROD1000 and Céos;
- the fast and effective development and implementation of solutions to guarantee the continuity of our home office operations, in response to the Covid-19 pandemic of about two weeks to activate all necessary solutions such as the availability of Microsoft Teams, which reaches more than 45,000 active daily users. Such tools will have perennial effects, remaining even after the pandemic is over. Notably, this effort has won the distinguished “IT Mídia” national award in the Energy sector for us;
- the beginning of project #tranS4mar, which brings together initiatives for the implementation of SAP S/4 HANA at Petrobras, that will be a digital enabler for Industry 4.0, throughout corporate and business selective processes review, simplification, digitization and integration. The evolution of our Enterprise Resource Planning (ERP) is placed among the biggest initiatives involving SAP solutions in the world;
- the delivery of dashboards and environments from the Upstream Integrated Data Platform, enabling the use of artificial intelligence in geological processing and providing an 80% reduction in the time spent on the analysis and consumption of data for geological modeling of the reservoirs;
- process optimization at 11 refineries (REPLAN, REVAP, REPAR, RECAP, REGAP, REDUC, REFAP, RPBC, REMAN, RNEST and LUBNOR), with gains of US\$196 million as of December 2020 (operating above 65% of the time in the optimal yield range), due to the implementation of the Digital Twins tool;
- process optimization and artificial intelligence (AI) tools at UN-BC and UN-ES offshore production platforms;

- the implementation of digital technologies to maximize the reliability of downstream operations, ensuring security for employees and financial gains resulting from increased productivity; and energy efficiency, with highlights for the control of the burning efficiency in flares through image recognition and also the development and use of artificial intelligence algorithms for the prediction of the impact by emission of odorous compounds in refineries, allowing a better management of emissions;
- the launch of the Center of Excellence in Analytics and Artificial Intelligence (CoE) which combines expertise, process and technology platforms to leverage value creation through digital technology across our value chain. The CoE in Analytics and Artificial Intelligence has already delivered models that are now being used to prevent Emergency Shutdown (ESD) in plants, optimization of gas processing and for the new Integrated Operation Centers. The CoE also has a role in developing digital technology skills throughout the organization – this effort is part of the Digital Transformation and Innovation Academy program;
- the integration of data, we developed predictive analytical models related to Covid-19 and online panels that were made available to monitor the physical presence in buildings and floors in order to prevent agglomerations and preserve the health of employees and to analyze trends and preventative actions. In addition to the availability of a mobile application, which allows employees doing face-to-face work to be notified when they have had close contact with people with any reported symptom of Covid-19;
- for meetings of the Board of Directors and Fiscal Council to take place remotely, we deployed a completely virtual and extremely secure solution, with agility and usability; and
- we have implemented WorkPlace by Facebook to enable communication and stimulate the engagement of the entire workforce, a crucial step in this time of remote work.

## Be Digital

In 2020, we continued the adoption of methodologies and mindset that support a culture of digital innovation aimed at generating results. In this regard, we highlight the creation of: (1) an Agile Center of Excellence (ACE), which focuses on the application of agile methodologies and practices, and creative problem-solving processes, such as Design Thinking. In 2020, we grew from 22 to 100 agile teams that are now helping the business units achieve higher efficiency and better results accelerating solutions for their biggest challenges; (2) a Digital Transformation and Innovation Academy to promote the training of professionals in new skills and roles needed for this transformation through innovative educational content and approaches; and (3) a Corporate Innovation Laboratory that will work in synergy with an ecosystem of internal and external partners for prototyping and testing in short cycles of digital solutions.

## Corporate Innovation Lab and Safety Innovation Lab

We just launched our Corporate Innovation Lab, with the mission of fostering value creation in the corporate areas through agile experimentation and open innovation. By leveraging an ecosystem of startups, tech companies, academia and crowdsourcing, and using the “fail fast” concept, the corporate lab not only aims to create disruptive solutions, but, above all, to address the crucial opportunities within corporate areas.

The safety of our workers is one of our core values. Even though our accident ratio is very low, a benchmark for the oil and gas industry, we challenged ourselves to improve safety even more. For this purpose, we also launched the Safety Innovation Lab, which follows the same processes of agility and collaboration above, to offer solutions to predict and prevent risks through actively monitoring work or reducing risk exposure by improving the use of wearables, intelligent video analytics, robotics and drones, for example.

## Digital Transformation Academy

Companies are transformed through transformation of people. Thus, we created a digital transformation academy to coordinate this transformation journey, ensuring that our teams will have all the necessary upskilling and reskilling routes available. Promoters and supporters of our transformation are supported with company investment in digital education programs. Through these efforts, we will provide additional skills for employees by providing tools on technology use, collaborative techniques and digital approaches that will empower them to be more efficient and effective on the execution of their roles. We will also prepare several employees for new data scientist roles, as required by our company transformation journey.

## Go Lean

In 2020, we started to rethink our internal processes, enabling them for digital transformation through inserting concepts of smart office and digital shared services center. The combination of shared processes brings the possibility of optimization and improved service level, especially with the application of new technologies. The implementation of digital solutions in the mobility processes allows for the expansion of self-service initiatives, enhancing cost optimization, reducing back-office, increasing the safety of users and employee experiences.

We accelerated the modernization of workplace environments, associated with the implementation of a definitive teleworking model, which imposes a new dynamic of work environments using coworking concepts and maximizing building occupancy. All of these environments speak directly to our culture transformation model, focused on employee-centric solutions. In addition, we developed changes in systems and processes for opening up the use of new mobility players and providers, expanding access to other options available on the market. We also introduced building optimizations of nine buildings in 2020 and during 2021, which we expect will reduce our operating expenses.

We also generate value through the active management of real estate assets, with the publication of 13 public notice of sale and the conclusion of two sales in the fourth quarter of 2020.

Another part of our strategy is to use our Shared Service Center capabilities as digital process powerhouses fostering and leading process simplification and digitalization as levers for increased workforce productivity, cost optimization, value creation and enabling our front office team to focus on our core business.

In this regard, the creation of the Center for Excellence in Robotization and Digitization (CERD), through digitization and process robotization, generates efficiency gains, making our environments safer and allowing the relocation of employees on operational repetitive tasks for activities of greater value. During six months of operation, CERD delivered more than 30 optimized process flows and digitalizations and 107 robotizations, contributing both to improving the efficiency of BE LEAN and to its automation on GO DIGITAL.

## Innovation and R&D

Along with the three initiatives mentioned above, we use innovation, research and development as tools to expand the creation of value and influence our strategy.

We have a history of successfully developing and implementing innovative technologies, mainly with respect to drilling, completing and producing wells in increasingly deepwater. Our efforts received four OTC awards, recently in 2019 for the technologies we developed for the Libra Extended Term Test. In 2020, the award recognized the set of innovations developed to enable production in the Búzios field, in the Santos Basin pre-salt. To make this project a reality, we developed a series of technologies for a scenario that combines challenging conditions, such as ultra-deepwaters and reservoirs located below the salt layer, subjected to high pressure levels, as well as a high presence of carbon dioxide. The innovations cover the technical areas of geosciences, reservoirs, wells, elevation and flow, as well as subsea technologies and surface installations. One of the main highlights of the development was the installation of four FPSO type vessels (floating oil production, storage and transfer unit) in a period of just 11 months in a single production field.

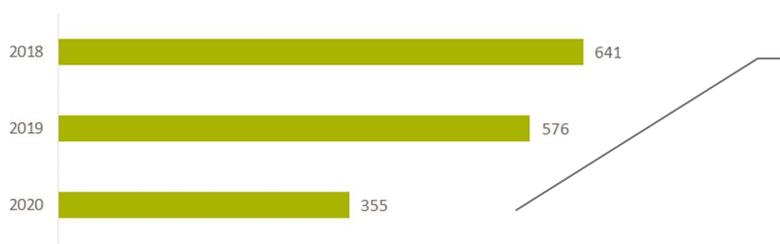
Our research and development center (CENPES) is one of the largest facilities of its kind in the energy sector and one of the largest in the Southern Hemisphere. The CENPES facility has a total area of 308,000 m<sup>2</sup>, and includes 147 laboratories and more than 8,000 pieces of equipment, with cutting edge technology. The facility's laboratories are dedicated in particular to pre-salt technologies, which is our main source of value. CENPES' mission is to "imagine, create and make today the future of Petrobras." As of December 31, 2020, this facility had 1,237 employees, 89 % of which are dedicated to research and development. This employee group includes 15 employees with post-doctoral degrees, 253 with doctorates and 365 with master's degrees in the sciences. We also have several semi-industrial scale prototype plants throughout Brazil that are located near our industrial facilities and are aimed at fast prototyping and scaling up new industrial technologies at reduced costs. In 2020, we engaged in several activities relating to research and development. We conducted joint research projects with more than 120 universities and research centers in Brazil and 85 outside of Brazil.

As we pursue valuable results in research and development, we are exploring new ways to innovate through disruptive technologies, digital transformation and start-up engagement. The innovation ecosystems are key to unlocking the full potential of emerging technologies and can speed up innovation. We currently work with technological partnerships to leverage our human capital. We have already started to improve our connections with innovation ecosystems by adopting new open innovation practices with start-ups. The first step was an innovation challenge in cooperation with the Brazilian Micro and Small Business Support Service ("SEBRAE") (a non-profit private entity with the mission of promoting the sustainable and competitive development of small businesses in Brazil) through a call for start-ups and small companies for projects aiming to improve technology readiness and implementation rates. In 2020, we launched the second public call for R&D challenges and optimized the engagement process when compared to our original initiative in 2019, increasing the number of proposals and startups involved. In addition, based on a strategy of quick wins, we also held a pioneering public call in order to test innovative solutions at scale that can improve the productivity or safety of critical operations.

It is among our research and development priorities to provide technologies for the deep and ultra-deepwaters, to meet desired operational efficiency and optimization of the recovery factor, and to provide technologies for downstream, gas and energy, as well as renewable energies aimed at long-term wind and solar operations. For instance, our program “PROD1000” has the ambition to reach 1,000 days between field discovery and beginning of production, compared to current average of 3,540 days (PROD1000). Our intention is to combine PROD1000 with “EXP100”, a program with the ambition to increase the chance of discovering oil to 100% in drilling exploratory wells, reducing project risks and costs by expediting production development. The result would be earlier starts of the production development stage, which would boost the full-cycle capital efficiency. CENPES is currently working towards a vision of the future that comprises smart subsea systems, with a high level of connectivity, leading to greater integrity management, reliability and significant cost and emissions reductions. The extensive use of resident autonomous underwater vehicles and enhanced exploration of the sea floor could increase the use of subsea processing systems, relieving topside units, which creates options for unmanned facilities, subsea to shore designs or a hybrid production system.

Brazilian Pre-Salt heterogeneous carbonate reservoirs typically present long net pays, high production/injection rates and flow assurance risks. The challenge is how to maximize production volume with minimum overall costs. In order to accomplish this challenge, two well designs were developed for Brazilian Pre-Salt application: PACI 3Z HD (Open Hole Intelligent Completion – three zones – Direct Hydraulics) and PACI-e (Open Hole Intelligent Completion – Electrical). Both focus on cost reduction and production maximization. The second design represents a technology breakthrough leading to better reliability resulting in maintenance cost reduction and ultimate recovery improvement when compared with the first design. In 2020 we achieved a new record for post-salt wells, by drilling a complete post-salt well in 44 days. This result is a game changer in brownfields, by the introduction of a new concept called “True One Trip – 3 Phases” due to its design innovation: drilling wells with only three phases and install all completion in one trip. This concept was developed by one of our multidisciplinary groups. This field trial also validates the concept, allowing its future application in several projects and ultimately resulting in a general cost reduction of 50%.

**RESEARCH AND DEVELOPMENT (US\$ MILLION)**



Currently, about 25.2% of our R&D portfolio includes digital technologies such as big data, high performance computing and artificial intelligence, in order to support the development of our business.

Additionally, in the three-year period ended December 31, 2020, our research and development operations were awarded 259 patents in Brazil and 51 overseas. Our patents portfolio covers all of our areas of activities. Currently, we have 878 patent applications under examination, 441 in Brazil and 473 abroad, throughout more than 40 countries.

In 2020, we built an innovation ecosystem that is constantly evolving to create and leverage the potential of new technologies and our human capital, accelerating the application of innovation in our businesses. We continuously improve our innovation ecosystem based on business objectives and share our challenges with the entire ecosystem, as in the Connections for Innovation program, organized in modules to modernize our relationship with Startups, Science and Technology Institutes and Companies. In 2020, we reinforced our structured relationship model with startups, accelerating the advancement of the technological and commercial maturity level of the solutions and increasing the success and implementation rate, thus stimulating the development of technological solutions for the oil, gas and energy sector.

In this context, we launched a second call for proposals within the Connections for Innovation program, in which we selected 18 startups, among 363 registered in the country and 100 more than the previous edition. In two years, we ended up selecting 23 startups among more than 500 participating in the selection process. A total amount of US\$1.9 million will be invested in the development of technological solutions proposed by the companies selected, in the areas of digital technologies, robotics, energy efficiency, corrosion, carbon reduction, geological modeling and inspection technologies.

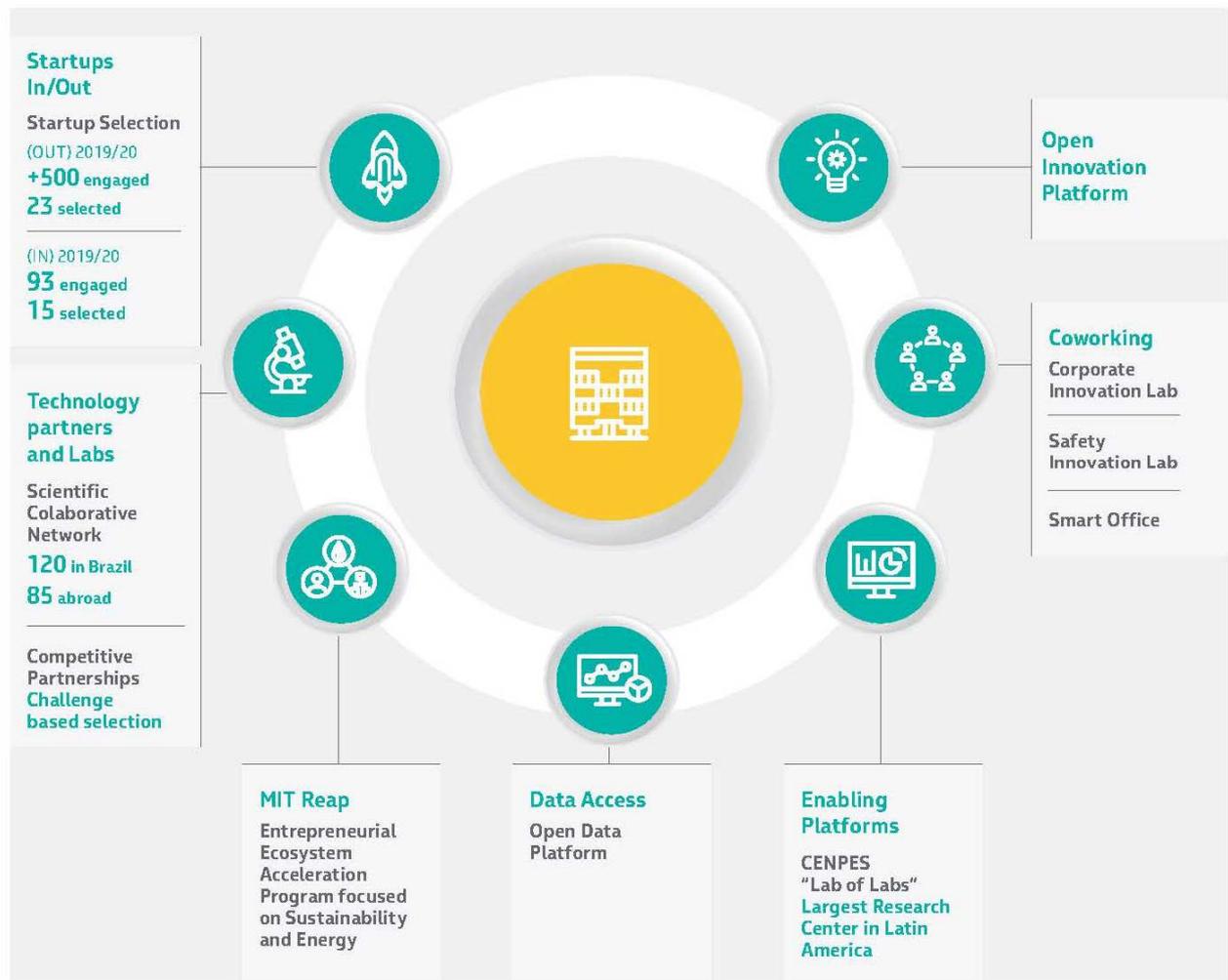
Additionally, we also held a pioneering public call in order to test innovative solutions at scale that can improve the productivity or safety of critical operations, considering the strategy of obtaining quick wins with the innovation process. In this call we published ten challenges and received around 70 proposals. In less than one month, eight companies were selected to test and validate their solutions to support us with our business goals.

In August 2020, the Massachusetts Institute of Technology (MIT) selected Rio de Janeiro to participate in the REAP (Regional Entrepreneurship Acceleration Program) that engages universities, corporations, government, entrepreneurs and venture capital investors. The project, with our support, stimulates innovative business environments through the articulation of entrepreneurship initiatives in the areas of energy and sustainability.

In addition to engaging with the entrepreneurial ecosystem, we use agile methodologies to accelerate our digital transformation through the development of innovative solutions by multidisciplinary teams that act as internal startups. In 2020, 93 proposals were received and 15 proposals were selected for the development of solutions by these startups.

The internal startups program is intended to contribute to our competitive advantage by seeking innovative and disruptive ideas that can transform our operations, enhancing efficiency and safety. It also plays an important role in our cultural transformation by strengthening entrepreneurship and a mindset of experimentation.

**CONNECTED TO ACCELERATE - INNOVATION ECOSYSTEM**



## Protect

Information security plays a crucial role in our day-to-day operations and is being treated as a priority and an innovation-enabler in our journey of digital transformation. In 2020, due to the intensification of cyber attacks since the beginning of the Covid-19 pandemic, we created the Center for Excellence in Treatment and Response to Security Events. The Center focuses on the cyber protection of our technological and operational assets, including industrial and control systems. This way, we have solid processes to protect our digital environments, in line with the best market practices and the constant improvement of preventative actions. Based on reference frameworks and benchmarks with oil and gas industry peers, a consistent work plan is underway, which we hope will elevate us to a position above the average of our market, regarding security management maturity, information, both in the corporate and automation environments.

We also lead a national intelligence network for sharing information about cyber attacks.

Privacy is another relevant topic for us. We see the legislation on the protection of personal data as an opportunity to evolve our degree of maturity, adding continuous improvements to this process. To this end, we have created a program to adapt to the Brazilian Law 13,709/2018 (the General Data Protection Law, "GDPL"), with a multidisciplinary and dedicated approach, which, through a governance model, includes the implementation of a privacy office to respond to legal requirements and guarantee the data rights of its employees and stakeholders.

During the last year, we implemented several initiatives in order to adapt to the GDPL. Some of these initiatives are outlined below.

- Implementation of Services for treatment of demands from data subjects.
- Implementation of Privacy and Data Protection Policies.
- Categorization of data subjects.
- Privacy and Personal data protection awareness events involving the entire workforce and the board.
- Creation of an online training format covering the basic topics of the GDPL.
- Publication of the new Code of Ethical Conduct with a chapter dedicated to the protection of personal data.
- Mapping of data flows, risk and gap analysis concerning privacy and personal data protection.
- Creation of space dedicated to the GDPL on the intranet portal and on internal social network.
- Creation of a page on privacy and protection of personal data on our website.
- Disclosure of institutional material on the GDPL for companies with our equity interest.
- Wide disclosure of the beginning of the GDPL's effectiveness in several internal channels.

- Implementation of basic contractual clauses with suppliers related to Privacy and Data Protection.
- Consolidation of a control framework based on the international standard ISO/IEC 27,701/2019 - privacy information management.



## **Environment, Social and Governance**

# Environment

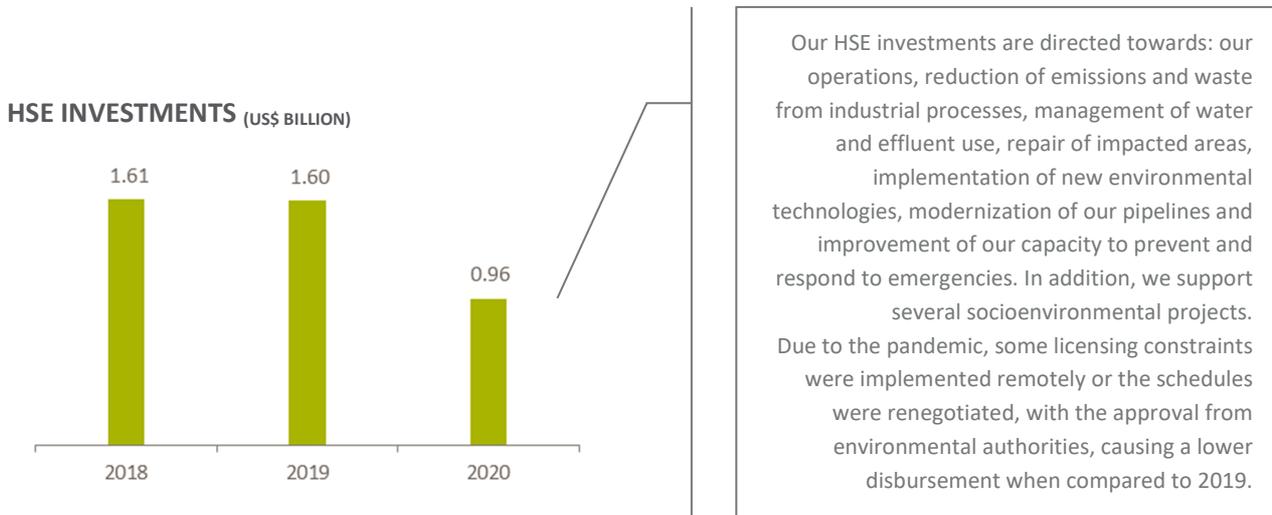
## Environment

The protection of human health and the environment is one of our primary concerns and is essential to our success. Each year, we maintain a set of initiatives focused on the prevention of accidents and the preservation of life and the environment. For this purpose, we launched the Commitment to Life Program (the “Program”), which aims to strengthen guidelines and standardize safety practices at all stages of our operations. The Program was launched in 2016. It is currently in its fifth cycle, 2020-2021, and supports the implementation of the Total Recordable Injury safety indicator and of the Leaked Volume of Oil and Petroleum Products, an environmental indicator, which are two one of our top metrics.

We structured these initiatives under our Program keeping in mind (i) the results of our Health, Safety and Environment (“HSE”) management assessments, (ii) the root causes of accidents identified in accident investigations and (iii) environmental scenarios in recent years and future perspectives.

The main initiatives of the Program for the 2020-2021 cycle are the following:





The development of business with suppliers also comprises environmental requirements according to the best practices in the industry. Contracted companies must present evidence and certifications related to compliance with HSE standards and confirm that they comply with all applicable requirements, laws and regulations, according to new commitments formalized in 2020.

Since 2019, we have been certified by ASCM Enterprise Certification, which is the first-of-its-kind corporate level designation that demonstrates supply chain excellence and transparency – a growing value for consumers as they become more educated about supply chain supporting ethical and sustainable business practices. The certification is valid for three years, with the annual requirement to demonstrate adherence to ASCM defined standards for certificate maintenance throughout the validity period. By obtaining the certification, we reinforce our commitment to continuously improve our capacity to manage goods and services supply processes, contributing to our increased credibility in a competitive market.

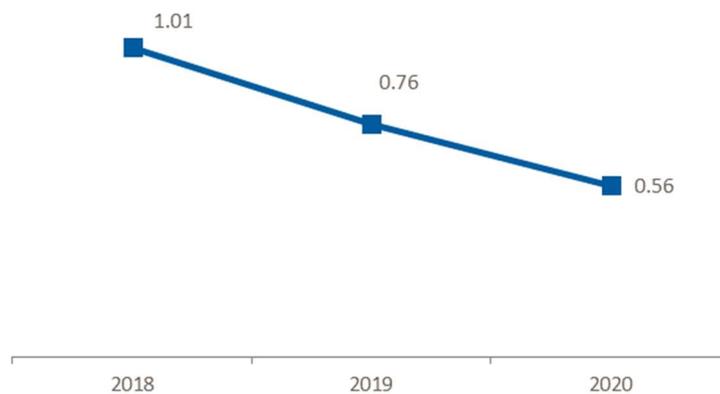
### Total Recordable Injury

Safety is one of our core values. The TRI rate is one of the metrics monitored by our senior management for matters of health and safety. The evolution of the TRI reflects the implementation of several initiatives for the promotion of our safety culture, trainings and our HSE management assessment program.

After obtaining a record TRI result of 0.56 and zero fatalities, in 2020, in our Strategic Plan we established the alert threshold for TRI below 0.70 for 2021, which is lower than the industry benchmark. We expect this result to place us among top oil and gas companies in terms of safety.

Eliminating fatal accidents and achieving top-notch performance when it comes to the prevention of injuries to our employees and to third parties are the two key important goals of our HSE management. In 2020, we trained our employees in process safety, HSE aspects in contracts, behavioral auditing, human factors, and almost 60,000 employees and outsourced professionals in hands safety.

**TOTAL RECORDABLE INJURY RATE – TRI <sup>(1)</sup>**



(1) The TRI result achieved in 2020 represents an important improvement compared to the 2019 TRI result. In 2019, our TRI result was the lowest among our peers, according to the results published in the Shell, ExxonMobil, Equinor and BP Sustainability reports.

We expect to train 100,000 employees and outsourced professionals in safety risks in 2021.

Although we develop prevention programs in all of our operating units, we recorded zero fatalities involving our own and contractors’ employees in 2020 (compared to two fatalities in 2019). Our procedure is to investigate all incidents reported in order to identify their causes and take preventative and corrective actions. These actions are regularly monitored once they are adopted. In case of serious accidents, we send company-wide alerts to enable other operating units to assess the probability of similar events occurring in their own operations.

## Environmental impacts

### Main Impacts



- 1) Industrial effluents, produced water and sanitary effluents (the latter included only in 2020, according to new GRI guidelines). The figure does not consider produced water reinjected in the oil/gas reservoirs for secondary recovery, nor the effluents from open refrigeration systems.
- 2) Oil spills greater than 1 barrel of oil or oil products that reached terrestrial or marine environments were considered. The volumetric criterion (> 1 barrel) is used in the corporate indicator of Oil and Oil Products Spills and is aligned with the National Oil Agency - ANP Manual for reporting incidents for E&P activities.

We are an energy company focusing on oil and gas. We therefore use natural resources and impact the ecosystem through our activities. However, we seek to reduce the impacts of our activities on the environment. In 2020, we invested US\$508 million in environmental projects, compared to US\$891 million in 2019 and US\$842 million in 2018. These investments continued to be primarily directed at reducing emissions and waste from industrial processes, managing water use and effluents, remedying impacted areas, implementing new environmental technologies, upgrading our pipelines and improving our ability to prevent and respond to emergencies. Due to the pandemic, some licensing constraints were implemented remotely or the schedules were renegotiated, with the approval from environmental authorities, causing a lower disbursement when compared to 2019.

We have established ten commitments in our Strategic Plan for the low carbon and sustainability agenda<sup>1</sup>:



25% reduction in absolute operational emissions by 2030



Zero routine flaring by 2030



Re-injection of approximately 40 MM ton CO<sub>2</sub> up to 2025 in carbon capture, utilization and storage projects



32% reduction in carbon intensity in the upstream segment by 2025 (15 kgCO<sub>2</sub>e/boe, maintained until 2030)



16% reduction in carbon intensity in refining segment by 2025, expanding to 30% by 2030 (30 kgCO<sub>2</sub>e/CWT)



40% reduction in methane emission intensity in the upstream segment by 2025



50% reduction in freshwater withdrawal in our operations by 2030, with a focus on water reuse



Zero increase in solid waste generation from our processes by 2025



100% of our facilities with biodiversity action plan by 2025



Maintenance of investments in socio-environmental projects

For more information, see “Strategic Plan” in this annual report.

<sup>1</sup> Carbon commitments related to 2015 base. Other commitments based on 2018.

## Spills and Environmental Remediation Plans

Oil and oil product spills totaled 216.5 m<sup>3</sup> in 2020, compared to 415.3 m<sup>3</sup> in 2019. Two main events were responsible for 99% of this total: (i) during the oil production line inertization procedure using diesel, the service line collapsed and led to a discharge of 64.04 m<sup>3</sup> of diesel into the sea, at FPSO Cidade de São Vicente, in the Farfan field, located in the Sergipe Basin in ultra-deepwater; and (ii) the discharge of approximately 148 m<sup>3</sup> of diesel at sea during a transfer operation with tug, at P-67 platform, in the Tupi Field, in the Santos Basin. In both cases, immediate pollution control procedures were implemented in order to minimize the impacts generated by the spills, and the causes were investigated for future prevention purposes.

We are constantly seeking to improve our standards, procedures and leakage response plans, which are structured at the local, regional and corporate levels.

In 2019, we set up a plan called “Mar Azul” (Blue Ocean) with the aim of identifying and addressing the main causes for loss of primary containment events, mainly those with environmental impacts potential. This plan consists of investments for improving the management of processes and for ensuring the integrity of our equipment and installations. We adopt our operational and sanitary procedures in order to ensure not only the readiness of the contingency bases but also a safety and efficient response on the field from specialized personnel. We also conduct major table-top exercises, including in the Buzios field, in the Santos basin Pre-Salt, which involved more than 200 people.

In 2020, the “Mar Azul” plan moved forward, proceeding to the structuring of phase two, and it was integrated to “*Programa Compromisso com a Vida*” (Commitment to Life Program), one of our major HSE programs.

As part of our environmental plans, procedures and efforts, we maintain detailed response and remediation contingency plans to be implemented in the event of an oil spill or leak from our offshore operations. The Brazilian Institute of the Environment and of Renewable Natural Resources (IBAMA) audits, approves and authorizes the execution of these programs.

In order to respond to these events, we have dedicated oil spill recovery vessels fully equipped for oil spill control and firefighting, support boats and other vehicles, additional support and recovery boats available to fight offshore oil spills and leaks, containment booms, absorbent booms and oil dispersants, among other resources. These resources are distributed in Environmental Defense Centers, located in strategic areas, in order to ensure rapid and coordinated response to onshore or offshore oil spills.

We have approximately 300 trained workers available to respond to oil spills 24 hours a day, seven days a week, and we can mobilize additional trained workers for shoreline cleanups on short notice from a large group of trained environmental agents in the country. While these workers are located in Brazil, they are also available to respond to an offshore oil spill outside of Brazil.

Since 2012, we have been a member of the Oil Spill Response Limited (“OSRL”), an international organization that brings together over 160 corporations, including major, national and independent oil companies, energy related companies as well as other companies operating elsewhere in the oil supply chain. OSRL participates in the Global Response Network, an organization composed of several other companies dedicated to fighting oil spills. As a member of the OSRL, we have access to all resources available through that network, and also subscribe to their Subsea Well Intervention Services, which provide swift international deployment of response-ready capping and containment equipment. The capping equipment is stored and maintained at bases worldwide, including Brazil.

In 2020, even with the Covid-19 pandemic, we conducted six remote emergency drills of regional scope using remote communication tools.

We continue to evaluate and develop initiatives to address HSE concerns and to reduce our exposure to HSE risks on capital projects and operations.

## Air Emissions and Transition to Low Carbon

Our actions related to climate change are supported by three pillars: (1) carbon quantification and transparency, (2) resilience of our position in oil and gas facing low carbon transition and (3) strengthening of our skills to create value in low carbon. To that end,

- we strive to ensure that carbon risks and opportunities are properly captured in scenarios, quantified, and considered in our decisions, for the sustainability and resilience of our business. We adopted transparency in carbon as a value and we highlight our recent public support to the TCFD – Task Force for Climate Related Financial Disclosures.
- our priority is to operate at low costs and with superior performance in carbon, in order to thrive in scenarios of low oil prices, carbon prices and possible oil differentiation based on their carbon intensity in production. For this, we established a set of low carbon targets and have a company-wide carbon mitigation program, with an allocated budget. In 2020, we reinforced our structure and governance by creating an executive management area of climate change that reports directly to the Chief Institutional Relations and Sustainability Officer. We have also reviewed our oil price key assumptions in 2020, assuming a long term price of crude oil of US\$50 and a resilience scenario of US\$35. Those are stringent assumptions for the price of oil, compatible with scenarios aligned with the Paris agreement and more conservative than the prices from IEA Sustainable Development Scenario.
- on the third pillar our focus is on innovation and in the acquisition of skills that may allow future diversification in renewables and low carbon products. While we are working to protect a solid financial situation in the medium and long term, we also work on our competitiveness to capture the potential opportunities in renewables in a long-term perspective. On that front we have recently announced our plans to produce advanced hydrotreated biofuels.

Our set of carbon targets and goals were updated in our Strategic Plan, adding an operational emissions reduction target for 2030 and expanding our upstream and refining intensity targets to 2030. Our operational emissions reduction target covers 100% of operated assets in all our businesses (including power generation), for all greenhouse gases and represents a material, relevant and short-term contribution to halting climate change. We include direct (Scope 1) and indirect GHG emissions from the acquisition of electric and/or thermal energy produced by third parties (Scope 2). Since 2019, metrics related to carbon intensity in our downstream and upstream operations have been integrated into executive remuneration. In 2020, these metrics were incorporated as one of our four top indicators, influencing variable remuneration not only for executives, but for all company employees.

In 2020, our performance in terms of GHG emissions was as follows:

- Total GHG emissions of 56 million tCO<sub>2</sub>e, consolidating six years of consecutive reduction of emissions and compatible with our target to reduce total operational GHG emissions by 25% by 2030, compared to 2015;
- Carbon intensity in E&P of 15.8 kgCO<sub>2</sub>e/boe<sup>2</sup>, on track for achieving the medium-term target of 15 kgCO<sub>2</sub>e/boe in 2025, maintained until 2030;
- Carbon intensity in refining of 40.2 kgCO<sub>2</sub>e/CWT<sup>3</sup> on track for achieving the medium-term target of 36 kgCO<sub>2</sub>e/CWT in 2025 and of 30 kgCO<sub>2</sub>e/CWT in 2030.

Our carbon intensity targets (E&P and Refining) represented a coverage of 76% of emissions from activities that we operated in 2020.

Our strategy also focuses on collaboration and we have continued to partner with other companies and with the science, technology and innovation community. We highlight, for instance, our participation in the Oil & Gas Climate Initiative and our support for the World Bank's "Zero Routine Flaring by 2030" initiative. Our program on Connections for Innovation – Startups Module, conducted in partnership with SEBRAE, had a topic of carbon reduction on its two editions (2020 and 2019). In fact, one of the winning companies of the 2020 edition, Alfa Sense, will work in GHG emissions reduction in our operations and Pam Selective Membranes, which was one of the winning companies in the 2019 edition, has initiated its work last year on carbon capture technology.

In addition, we note that our Climate Change Supplement is available on our website, serving as an internal guide which details our contributions to reducing the carbon intensity of our energy supply and how we aim to remain competitive in an evolving context.

<sup>2</sup> The kg CO<sub>2</sub>e / boe indicator considers gross oil and gas production ("wellhead") in its denominator.

<sup>3</sup> The kg CO<sub>2</sub>/CWT indicator was developed by Solomon Associates specifically for refineries and was adopted by the European Emissions Trading System (EU Emissions Trading System, EU ETS) and by CONCAWE (association of European oil refining and distribution companies and gas). A refinery's CWT (Complexity Weighted Tonne) considers the potential for GHG emissions, in equivalence to distillation, for each process unit. Thus, it is possible to compare emissions from refineries of various sizes and complexities. We monitor the kg CO<sub>2</sub>/CWT indicator, according to our original identity. We also monitor an adapted indicator: kg CO<sub>2</sub>e / CWT, to enable the inclusion of emissions from other GHG (for example methane), which, however, represents a small portion of our refining emissions.

# Social Responsibility

## Human Rights

A commitment to human rights is key for the sustainability of our business. Several documents governing our activities detail our approach to human rights, as follows:

- **Code of Ethical Conduct:** addresses issues such as respect for diversity, equal opportunities, fair labor relations, health and safety assurance for workers and the right to free association.
- **Guide to Ethical Conduct for Suppliers:** reinforces that our suppliers must promote dignified and safe working conditions for their employees and combat child and slave labor, in addition to promoting diversity, gender and racial equality and the inclusion of people with disabilities.
- **Human Resources Policy:** states that we must provide employees with a good working environment that promotes diversity and relationships based on trust and respect, without tolerating any form of harassment or discrimination.
- **Social Responsibility Policy:** seeks to prevent and mitigate negative impacts on our direct activities, supply chain and partnerships. It is based on respect for human rights and seeks to combat discrimination in all its forms, setting forth standards related to social risk management, community relations and social investment present in the guidelines related to these subjects.
- **Sustainability Report:** our reported indicators and actions follow the Sustainable Development Goals outlined in the sustainability report: Correlation with Global Reporting Initiative (GRI) Indicators, Sustainable Development Goals (SDGs) and Global Compact Principles. We use the IPIECA Oil and Gas Industry Guide for Voluntary Reporting as a supplementary reporting methodology.

Our respect and defense of human rights commitments are also evident through initiatives in favor of gender equity, racial equality, and the protection of early childhood. We list below our main human rights initiatives.

2003	2005	2010	2015	2018	2019
UN global compact	Gender and race pro-equity program	Women's empowerment principles Corporate Statement Against Children's and Adolescents' Sexual Exploitation	National pact for the eradication of slave labor	Business initiative for equality Open letter enterprises for human rights	Early childhood national network

In 2010, we adhered to the seven UN Women's Empowerment Principles ("WEPs"), which address the promotion of gender equality in the labor market and in society. Over time, our internal gender equity promotion policies have secured recognition in the 2019 WEPs Brazil Award, an award organized by a partnership between UN Women, the International Labor Organization, and the European Union, geared towards companies promoting gender equity and women's empowerment.

In November 2018, we joined the Business Initiative for Equality, put forward by the NGO Afrobras and Zumbi dos Palmares College. Through its 10 commitments, the initiative aims to promote racial equality, equal opportunities, and fair treatment for all. In 2018, we also signed the Open Letter Enterprises for Human Rights, where we pledged, among other things, to adopt a policy of communication, investigation of complaints, and sanctions, in order to suppress practices that go against our Code of Ethical Conduct.

We also promote a commitment to human rights in our supply chain. Each year, the most distinguished suppliers are awarded with "*Prêmio Melhores Fornecedores da Petrobras*" ("Award for Best Petrobras Suppliers"). Beyond technical categories, some special ESG category awards include Diversity (focus on Gender Equity, Persons with Disabilities, and Racial Equality), Early Childhood Education, and Best Practices in Compliance. Suppliers were awarded in these ESG categories regarding their performance in 2019.

In August 2019, we launched the Petrobras Early Childhood Initiative. In December 2019, we signed the National Pact for Early Childhood, a commitment signed by several sectors to protect children in Brazil, which aims to strengthen public institutions dedicated to guaranteeing rights provided for in Brazilian legislation and to promote the improvement of the necessary infrastructure to protect children's interests. In 2020, the Petrobras Early Childhood Initiative implemented a series of intersectoral programs in 15 Brazilian municipalities aimed at protecting and boosting children's development in their first six years of life.

We have also formalized support for the Synapse project, executed by the Institute of Research in Technology and Innovation, as another Petrobras Early Childhood Initiative project. The project seeks the improvement of educational technology recognized by the Ministry of Education, which integrates the management of educational data of attendance, grades and enrollment, among others.

The “Early Childhood is Priority” project, carried out by the Children’s Rights News Agency (ANDI), has made important contributions in the field of promoting access to public data and offering a digital library with a large collection specialized in Early Childhood through the digital platform “*Observa.*” Launched in 2020, this platform provides public access to Brazilian early childhood indicators in the areas of health, social assistance, and education in all national municipalities at a local, state, and federal level. In addition, ANDI has promoted training to ensure the rights of children and adolescents to develop municipal plans for Early Childhood and, in partnership with the University of Brasilia, has developed a discipline for undergraduate studies in Communication and Journalism, with the aim of qualifying and expanding coverage of early childhood issues in Brazilian society. In June 2020, we launched our Human Rights Guidelines for business strategies with a view to ensuring respect for human rights, recognized nationally and internationally in all regions where we operate and throughout the life cycle of our projects and operations. Our human rights operations are guided by the United Nations’ Guiding Principles on Business and Human Rights and structured along four axes: People Management, Community Relations, Involvement with the Supplier and Partner Chain, and Due Diligence in Human Rights. Each axis describes the processes from which we aim to ensure the incorporation of respect for human rights in all areas of our business and in our relations with our stakeholders, as well as to identify potential risks of human rights violations related to operations, products, or services we provide, and to remedy the impacts we cause.

Regarding the support given to projects through the Petrobras Socio-Environmental Program, we consider that actions aimed at the promotion of human rights are a high value attribute. In 2020, we included human rights as a transversal theme of the Program, as it can be applied to all projects in relation to its main theme, to expand the scope and potential for transformation of the Program. The projects that carry out affirmative actions to promote Gender Equity, Racial Equality, and Inclusion of People with Disabilities must demonstrate the association between their actions and the expected results. Across all our activities, we carry out social risk assessments, where we seek to identify and mitigate potential human rights impacts in the supply chain. These assessments lead to recommendations including the review of emergency response plans through the lens of community relationships, monitoring of community occurrences and complaints, disclosure of projects and operational activities, and the inclusion of social responsibility clauses in service contracts, among others.

## Community Relationship

We are committed to maintaining a long-term community relationship based on dialogue and transparency. To achieve this, we seek to know the dynamics of the communities that neighbor the sites where we operate and their leaders, and to develop relationship plans which we monitor and evaluate.

We seek to foster collaborations to strengthen ties, promote networking, and generate mutual benefits while respecting the social, environmental, territorial and cultural rights of communities. We promote committees, meetings, lectures, visits and investment in social and environmental programs and projects, which aligns with the objectives of our business and contributes to the conservation of the environment and improvement of the living conditions of the communities where we operate.

In 2020, our community relationship activities carried out 300 interactions in communities, including online meetings with community leaders through community committees, visits and events.

Additionally, we strengthen our work with communities, civil society organizations, the public sector and universities through the Petrobras Socio-Environmental Program. This initiative contributes to environmental conservation and the improvement of living conditions where we operate. The program is aligned with our social responsibility policy, which seeks to provide energy, respect human rights and the environment, responsibly manage our relationship with nearby communities and overcome sustainability challenges. The portfolio included 147 projects in 2020.

The main fronts of our Socio-Environmental Program were revised in January 2020 and are aligned with our Strategic Plan, as well as to the Sustainable Development Goals, SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 14 (Life Bellow Water) and SDG 15 (Life on Land). We have also prioritized the strategy of transition to low carbon economy and offshore operations. Our budget for such projects has been adjusted by the Resilience Plan released on March 8, 2020. The performance of the activities planned in the Petrobras Socio-Environmental Program projects has also been impacted by social isolation measures, since many involved collective and face-to-face events.

Thus, to mitigate the risks related to Covid-19, the projects acted in an agile manner, adopting a series of measures to safeguard the health of the technical teams and their beneficiaries while maintaining distanced activities. During this period, it was possible to count on the support of our network of socio-environmental projects for the distribution of hygiene and cleaning items and basic food baskets to the communities surrounding our operations, in addition to the sharing of content and important issues for society in general, through digital platforms and social networks. The sponsored projects have participated in more than 430 live video sessions on social networks, in which educational content, human rights, entrepreneurship, sustainable development, species conservation, among others, have been shared.

In addition to the problems arising from the Covid-19 pandemic, we experienced other emergency situations in Brazil in 2020, such as floods in the states of Minas Gerais and Espírito Santo, fires in the Pantanal region, and blackouts in Amapá. Thus, to increase our contribution to society, we have increased the amount of our donations (US\$4,956,166.37). In 2020, we invested US\$17,267,625.83 in social and environmental projects, 42% less than in 2019. This decrease takes into consideration the exchange rate variation of the *real* compared to the U.S. dollar between 2019 and 2020. Thus, the percentage decrease is 42% reported in U.S. dollars and 23% reported in reais. Therefore, the amount of donations and investment in social and environmental projects totals US\$22,223,792.20 directly transferred to society in 2020.

We have also incorporated guidelines in our decision-making process related to capital investment projects, including social risk analysis and human rights violations performed by a multidisciplinary group. In 2020, 32 new risk assessments were required to support projects passing through formal planning gates, compared to 18 in 2019.

# Corporate Governance

Since 2015, we have been implementing a series of governance improvements.

As one of the key actions, we have established a new corporate governance model and created a set of rules and procedures that seek to ensure that our decisions are aligned with good governance:

## OUR MAIN GOVERNANCE IMPROVEMENTS

 <p><b>Board of Directors</b></p> <ul style="list-style-type: none"> <li>Independent members</li> <li>Business experience</li> <li>Background check</li> <li>Barrier for political appointments</li> </ul>	 <p><b>Public Interest</b></p> <ul style="list-style-type: none"> <li>Definition</li> <li>Disclosure on the Financial Statements</li> <li>Government compensation</li> </ul>	 <p><b>Transactions with the State</b></p> <ul style="list-style-type: none"> <li>Minority Committee and Audit Committee approval</li> <li>Qualified Board approval</li> </ul>	 <p><b>Improvements in the decision-making process</b></p> <ul style="list-style-type: none"> <li>Board Advisory Committees</li> <li>Shared authorization</li> </ul>	 <p><b>Whistleblower Channel</b></p> <ul style="list-style-type: none"> <li>External &amp; Independent Whistleblower Channel</li> </ul>	 <p><b>Governance &amp; Compliance Department</b></p> <ul style="list-style-type: none"> <li>Report directly to the Board</li> <li>Qualified dismissal</li> <li>Level 2 – B3</li> </ul>
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Law 13,303/16 requires that our Board of Directors be formed by at least 25% of independent members. Our Bylaws extended the requirement to 40%. Technical criteria for the selection of members of the Board of Directors and executive officers set forth in Law 13,303/16 and in our Bylaws banned the appointment of ministers, secretaries and others in certain positions of public administration. Our Bylaws also provided additional requirements in addition to those of Law 13,303/16 for assessing the reputation of the administrators and members of the Fiscal Council.

As we are a mixed-capital company, the Brazilian federal government can guide our activities, with the purpose of contributing to the public interest that justified our creation, aiming to guarantee the supply of oil products throughout the national territory. However, this contribution to the public interest must be compatible with our corporate purpose and with market conditions and cannot jeopardize our profitability and financial sustainability.

Thus, if providing for the public interest calls for conditions different from those of any other private sector company operating in the same market, as explained in our Bylaws, the obligations or responsibilities that we assume must be defined in rules or regulations and outlined in a specific document, such as a contract or agreement, widely publicized and with disclosure in such instruments of detailed costs and revenues, including in the accounting plan. Then, the Brazilian federal government will compensate us, each fiscal year, for the difference between market conditions and the operating result or economic return of the assumed obligation.

Transactions with the Brazilian federal government that require our Board of Directors' approval and occur outside the normal course of business must have been previously reviewed by the minority committee and approved by two-thirds of the board. The minority committee is formed by two members of our Board of Directors appointed by minority common shareholders and preferred shareholders, as well as one independent member, according to our Bylaws.

We have made improvements in our governance decision-making process as well. Our Bylaws already define the board advisory committees that review all matters submitted to the Board of Directors prior to a decision. In order to ensure transparency in our most relevant decisions, we have implemented a shared authorization model, where at least two people must come to a decision (the four-eyes principle).

Our whistleblower channel is an independent, confidential and impartial tool. It is available to our external and internal audiences and our controlled companies to register denouncements of fraud, corruption, money laundering, harassment, discrimination, HSE and other issues.

Our Board of Directors nominates the chief governance and compliance officer. The majority of the board must approve the dismissal of such an officer, with the vote of at least one of the directors elected by minority shareholders.

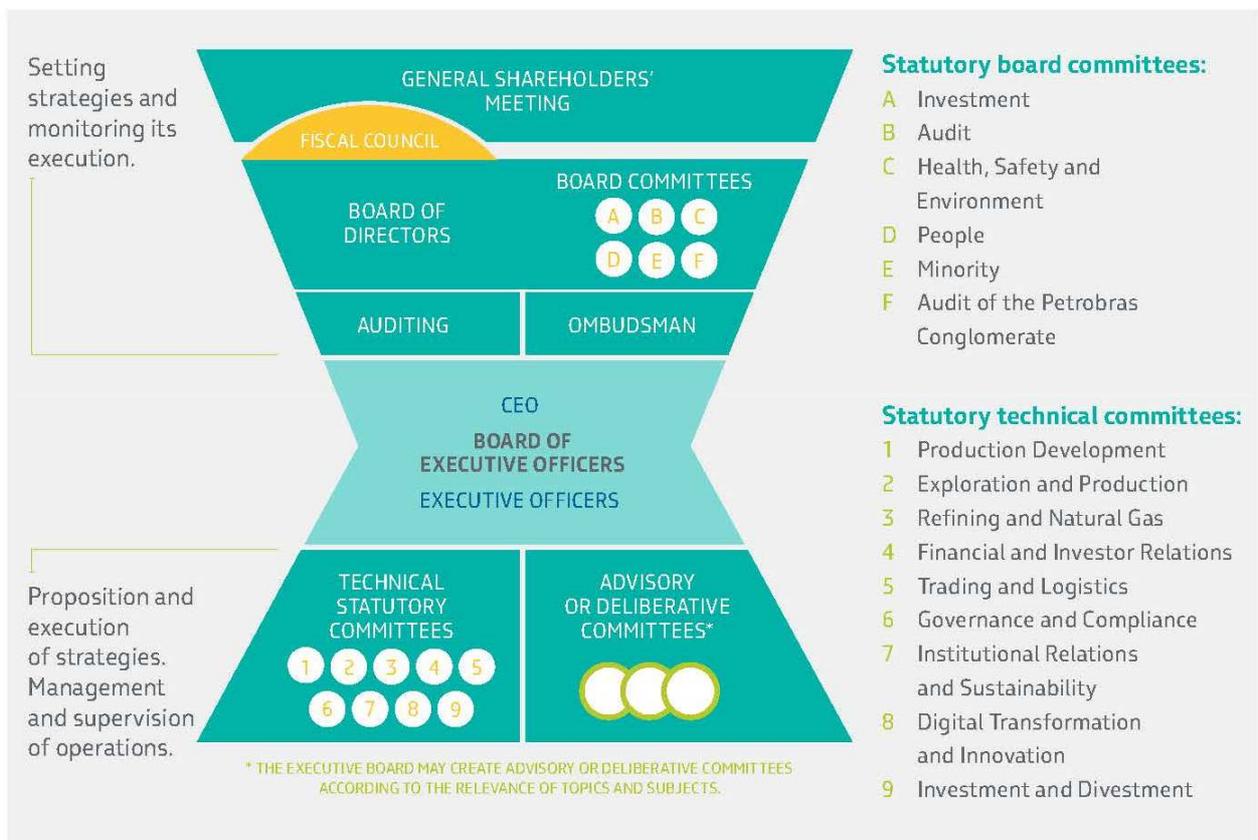
We are part of the special Level 2 corporate governance listing segment of the B3, which demands compliance with differentiated governance regulation and the improvement of the quality of the information we provide. This voluntary move to Level 2 of the B3 reinforces our advances in corporate governance and ratifies our commitment to the continued improvement of processes and to our alignment with market best practices.

Possible initiatives related to changes for governance improvements require formality and transparency of process. In most cases, a shareholders' meeting is required if the proposed change is to a governance rule provided for in our Bylaws or stems from a legislative amendment if relates to a Law 13,303/16 provision.

## Corporate Governance Structure

Our corporate governance structure consists of a general shareholders’ meeting, our Fiscal Council, Board of Directors and its committees, internal and external audits, general ombudsman office, Board of Executive Officers and its committees.

### GOVERNANCE STRUCTURE



Our Code of Best Practices gathers our main governance policies and aims to improve and strengthen our governance mechanisms, guiding the performance of our directors, executive officers, managers, employees and collaborators.



## Our Code of Best Practices

We have a Code of Best Practices, which is an instrument approved by our Board of Directors that brings together our main governance policies (available at our website), as listed below:



Relevant Act or Fact Disclosure and Negotiation of Securities Policy



Appointment Policy for Members of Senior Management and Fiscal Council



Compliance Policy



Communication and Relations Policy



Business Risk Management Policy



Petrobras' Related Party Transactions Policy



Ombudsman Policy



Corporate Governance Policy



Shareholders Compensation Policy



Indemnity Commitment Application and Governance Policy

## Shareholders' Meeting

The shareholders' meetings must take place on an ordinary or extraordinary basis. An ordinary shareholders' meeting must take place once a year in order to approve our results and profits. In addition to the matters provided for by law, an extraordinary shareholders' meeting must take place if called to decide on matters of our best interest, as defined in our Bylaws.

For more detailed information on our shareholders' meetings, see "Shareholder Information" in this annual report.

## Comparison of our Corporate Governance Practices with NYSE Corporate Governance Requirements Applicable to U.S. Companies

Under the rules of the NYSE, foreign private issuers are subject to a more limited set of corporate governance requirements than U.S. domestic issuers. As a foreign private issuer, we must comply with four principal NYSE corporate governance rules: (i) we must satisfy the requirements of Rule 10A-3 under the Exchange Act; (ii) our Chief Executive Officer must promptly notify the NYSE in writing after any executive officer becomes aware of any material non-compliance with the applicable NYSE corporate governance rules; (iii) we must provide the NYSE with annual and interim written affirmations as required under the NYSE corporate governance rules; and (iv) we must provide a brief description of any significant differences between our corporate governance practices and those followed by U.S. companies under NYSE listing standards.

The table below briefly describes the significant differences between our corporate governance practices and the NYSE corporate governance rules.

Section	New York Stock Exchange Corporate	Governance Rules for U.S. Domestic Issuers Our Practices
<b>Director Independence</b>		
303A.01	Listed companies must have a majority of independent directors. “Controlled companies” are not required to comply with this requirement.	We are a controlled company because more than a majority of our voting power is controlled by the Brazilian federal government. As a controlled company, we would not be required to comply with the majority of independent directors requirement if it were a U.S. domestic issuer. According to our Bylaws, we are required to have at least 40% of independent directors.
303A.03	The non-management directors of each listed company must meet at regularly scheduled executive sessions without management.	Except for our CEO (who is also a director), all of our directors are non-management directors. The regulation of our Board of Directors provides that if a particular matter may represent a conflict of interests, the CEO must refuse himself from the meeting, which will continue without his presence. Additionally, the board’s regulation also establishes a regular executive session for our Board of Directors matters without management.

**Nominating/Corporate Governance Committee**

303A.04	Listed companies must have a nominating/ corporate governance committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties. “Controlled companies” are not required to comply with this requirement.	We have a statutory committee that verifies the compliance of the appointment of members of our Fiscal Council, our Board of Executive Officers, and our Board of Directors and the external members of the committees that advise our Board of Directors. Our People Committee has a written charter that requires the majority of its members to be independent. Our Board of Directors develops, evaluates and approves corporate governance principles. As a controlled company, we would not be required to comply with the nominating/corporate governance committee requirement if we were a U.S. domestic issuer.
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**Compensation Committee**

303A.05	Listed companies must have a compensation committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties. “Controlled companies” are not required to comply with this requirement.	We have a committee that advises our Board of Directors with respect to compensation and management succession. Our People Committee has a written charter that requires the majority of its members to be independent. As a controlled company, we are not required to comply with the compensation committee requirement.
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**Audit Committee**

303A.06	Generally, listed companies must have an audit committee with a minimum of three independent directors that satisfy the independence requirements of Rule 10A-3 under the Exchange Act, with a written charter that covers certain minimum specified duties. However, pursuant to Exchange Act Rule 10A-3(c)(3), a foreign private issuer is not required to have an audit committee equivalent to or comparable with a U.S. audit committee if the foreign private issuer has a body established and selected pursuant to home country legal or listing provisions expressly requiring or permitting such a body, and if the body meets the requirements that (i) it be separate from the full board, (ii) its members not be elected by management, (iii) no executive officer be a member of the body, and (iv) home country legal or listing provisions set forth standards for the independence of the members of the body.	Our audit committee is a statutory advisory committee to our Board of Directors and satisfies the exemption set forth in Rule 10A-3(c)(3) under the Exchange Act. See “Management and Employees–Audit Committee” for a description of our audit committee. Our audit committee has a written charter that sets forth its responsibilities that include, among other things: (i) strengthening ties with the external auditors, permitting closer supervision of their work and of issues regarding their competency and independence, (ii) assuring legal and regulatory compliance, including with respect to internal controls, compliance procedures and ethics, and (iii) monitoring our financial position, especially as to risks, internal auditing work and financial disclosure; (iv) carry out prior analysis of transactions with related parties that meet the criteria established in the Related Party Transactions Policy, approved by our Board of Directors.
303A.07		

**Equity Compensation Plans**

303A.08	Shareholders must have the opportunity to vote for compensation plans through shares and material reviews, with limited exceptions as set forth by the NYSE's rules.	Under Brazilian Corporate Law, shareholder approval is required for the adoption and revision of any equity compensation plans. We do not currently have any equity compensation plans.
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**Corporate Governance Guidelines**

303A.09	Listed companies must adopt and disclose corporate governance guidelines.	We have a set of Corporate Governance Guidelines ( <i>Diretrizes de Governança Corporativa</i> ) that address general ombudsman qualification standards, responsibilities, composition, appraisals and access to information by the management. The guidelines do not reflect the independence requirements set forth in Sections 303A.01 and 303A.02 of the NYSE rules. Certain portions of the guidelines, including the responsibilities and compensation sections, are not discussed with the same level of detail set forth in the commentaries to the NYSE rules. The guidelines are available on our website. We also have a Corporate Governance Policy, approved by our Board of Directors, which establishes our governance principles and guidelines. This policy applies to Petrobras and its affiliated, pursuant to Article 16 of our Bylaws.
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**Code of Ethics for Directors, Officers and Employees**

303A.10	Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.	We have a Code of Ethical Conduct ( <i>Código de Conduta Ética</i> ), applicable to the members of the Board of Directors and its advisory committees, members of the Fiscal Council, members of the Executive Board, employees, interns, service providers and anyone acting on behalf of the Petrobras ("collaborators"), including its subsidiaries in Brazil and abroad, and a Code of Best Practices ( <i>Código de Boas Práticas</i> ) applicable to our directors, executive officers, senior management, employees and collaborators. No waivers of the provisions of the Code of Ethical Conduct or the Code of Best Practices are permitted. These documents are available on our website.
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**Certification Requirements**

303A.12	Each listed company CEO must certify to the NYSE each year that he or she is not aware of any violation by the company of NYSE corporate governance listing standards.	Our CEO will promptly notify the NYSE in writing if any executive officer becomes aware of any material noncompliance with any applicable provisions of the NYSE corporate governance rules.
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# Operating and Financial Review and Prospects

## Consolidated Financial Performance

Our results in 2020 were based on a transformational agenda supported by five pillars: (i) maximization of the return on capital employed, (ii) reduction in the cost of capital, (iii) relentless search for low costs, (iv) meritocracy and (v) safety, health, respect for people and the environment. We achieved net cash provided by operating activities of US\$28.9 billion, a Free Cash Flow (a non-GAAP measure defined below) of US\$22 billion and Adjusted EBITDA (a non-GAAP measure defined below) of US\$28.4 billion.

Operating income in 2020 was US\$10 billion, 51% lower than 2019 primarily due to lower average Brent prices in 2020 and increase in operating expenses, mainly, higher impairment, as a result of the reduction in projected Brent prices, and higher selling expenses, led by an increase in international freight costs and the sale of 90% stake held in TAG in 2019, resulting in higher payments of associated tariffs in 2020. On the other hand, in 2020 there were more exports, which compensated for the reduction in demand and margins on oil products in Brazil, lower General and Administrative expenses (G&A) and gains of the health care plan actuarial review, as a consequence of the reduction in the contribution paid by us. There were also gains related to the exclusion of the VAT tax from the calculation basis of the PIS/COFINS and lower provision for legal and administrative proceedings in 2020. Net income attributable to our shareholders was US\$ 1.1 billion in 2020, an 89% decrease compared to 2019, mainly as a result of lower Brent prices, higher impairment losses, lower gains with divestments and the depreciation of the *real* against the U.S. dollar.

In 2019, we lost control of BR Distribuidora through a secondary public offering. Accordingly, pursuant to IFRS 5 – Non-current Assets Held for Sale and Discontinued Operations, our investment became a discontinued operation, since it represented a separate major line of business. Thus, in the consolidated statement of income and cash flows, the net income, operating, investing and financing cash flows relating to BR Distribuidora are presented in separate line items, as a net amount for discontinued operations.

Fluctuations in our financial condition and results of operations are driven by a combination of factors, including:

- the volume of crude oil, oil products and natural gas we produce and sell;
- changes in international prices of crude oil and oil products (denominated in U.S. dollars);
- changes in the domestic prices of oil products (denominated in *reais*);
- fluctuations in the *real* vs. U.S. dollar exchange rates and other currencies, as discussed in Note 34.2 to our audited consolidated financial statements;
- the demand for oil products in Brazil;
- the recoverable amounts of assets for impairment testing purposes; and
- the amount of production taxes from our operations that we are required to pay.



## Exchange rate variation impacts

As we are a Brazilian company and most of our operations are carried out in Brazil, we prepare our financial statements primarily in *reais*, which is our functional currency and that of all of our Brazilian subsidiaries. We also have entities that operate outside Brazil, the functional currency of which is the U.S. dollar. We have selected the U.S. dollar as our presentation currency in this report to facilitate the comparison with other oil and gas companies. We have used criteria set forth in IAS 21 – “The effects of changes in foreign exchange rates” to translate the audited consolidated financial statements from *reais* into U.S. dollars. Based on IAS 21, we have translated (i) all assets and liabilities into U.S. dollars at the exchange rate as of the date of the statement of financial position; (ii) all accounts in the statements of income, other comprehensive income and cash flows using the average exchange rates prevailing during the relevant period and (iii) equity items at the exchange rates prevailing at the respective transactions dates.

### CONSOLIDATED STATEMENT OF INCOME

	As reported (US\$ million)			
	Jan-Dec		Variation	
	2020	2019	▲	▲ (%)
Sales revenues	53,683	76,589	(22,906)	(29.9)
Cost of sales	(29,195)	(45,732)	16,537	(36.2)
<b>Gross profit</b>	<b>24,488</b>	<b>30,857</b>	<b>(6,369)</b>	<b>(20.6)</b>
Selling expenses	(4,884)	(4,476)	(408)	9.1
General and administrative expenses	(1,090)	(2,124)	1,034	(48.7)
Exploration costs	(803)	(799)	(4)	0.5
Research and development expenses	(355)	(576)	221	(38.4)
Other taxes	(952)	(619)	(333)	53.8
Impairment of assets	(7,339)	(2,848)	(4,491)	157.7
Other income and expenses	998	1,199	(201)	(16.8)
<b>Operating income</b>	<b>10,063</b>	<b>20,614</b>	<b>(10,551)</b>	<b>(51.2)</b>
<b>Net finance income (expense)</b>	<b>(9,630)</b>	<b>(8,764)</b>	<b>(866)</b>	<b>9.9</b>
Results of equity-accounted investments	(659)	153	(812)	(530.7)
<b>Income before income taxes</b>	<b>(226)</b>	<b>12,003</b>	<b>(12,229)</b>	<b>(101.9)</b>
Income taxes	1,174	(4,200)	5,374	(128.0)
Net income from continuing operations for the period	948	7,803	(6,855)	(87.9)
Net income from discontinued operations for the year	-	2,560	(2,560)	(100.0)
<b>Net income for the year</b>	<b>948</b>	<b>10,363</b>	<b>(9,415)</b>	<b>(90.9)</b>

For more information regarding our functional and presentation currency, see “About Us” and Note 2.3 to our audited consolidated financial statements.

Exchange rate fluctuations have multiple effects on our results of operations in reais.

## EXCHANGE AND INFLATION RATES

	2020	2019	2018
Year-end exchange rate ( <i>reais/US\$</i> )	5.20	4.03	3.87
Appreciation (depreciation) during the year <sup>(1)</sup>	(28.9%)	(4.1)%	(16.9)%
Average exchange rate for the year ( <i>reais/US\$</i> )	5.16	3.95	3.65
Appreciation (depreciation) during the year <sup>(2)</sup>	(30.7%)	(8.2)%	(14.4)%
Inflation rate (IPCA)	4.52%	4.31%	3.75%

(1) Based on year-end exchange rate.

(2) Based on average exchange rate for the year.

From January 1, 2021 to March 23, 2021, the *real* has depreciated 5.43% against the U.S. dollar.

When the *real* appreciates against the U.S. dollar, generally the effect is an increase both in revenues and expenses when expressed in U.S. dollars. When the *real* depreciates against the U.S. dollar, as it did in 2020, generally the effect is a decrease both in revenues and expenses when expressed in U.S. dollars.

Exchange rate fluctuations may affect the results of variables such as the following:

- Margins:** The relative pace at which our total revenues and expenses in *reais* increase or decrease as a result of exchange rate fluctuations, and its impact on our margins, is affected by our pricing policy in Brazil. Absent changes in the international prices of crude oil, oil products and natural gas, when the *real* appreciates against the U.S. dollar, and we do not adjust our prices in Brazil, our margins generally increase. Absent changes in the international prices of crude oil, oil products and natural gas, when the *real* depreciates against the U.S. dollar and we do not adjust our prices in Brazil, our margins generally decline. However, it is our goal to sell our products in Brazil at parity with international product prices. For further information on our prices and recent developments in our pricing policies, see “Sales Volumes and Prices” in this section and “Recent Developments” in this annual report.
- Debt service:** The depreciation of the *real* against the U.S. dollar also increases our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt increases with the depreciation of the *real*. A depreciation of the *real* also increases our costs to import oil, oil products, goods and services necessary for our operations and our production taxes. Unless the depreciation of the *real* is offset by higher prices for our products sold in Brazil, which is the practice under our currently pricing policy, a depreciation increases our debt service relative to our cash flows while also reducing our operating margins. As our net debt denominated in other currencies increases, the negative impact of a depreciation of the *real* on our results and net income when

expressed in *reais* also increases, thereby reducing the earnings available for distribution.

- **Retained earnings available for distribution:** Exchange rate variation also affects the amount of retained earnings available for distribution by us when expressed in U.S. dollars. Amounts reported as available for distribution in our statutory accounting records are calculated in *reais* and prepared in accordance with IFRS. They may increase or decrease when expressed in U.S. dollars as the *real* appreciates or depreciates against the U.S. dollar.

We designated hedging relationships to account for the effects of the existing hedge between a foreign exchange gain or loss from portions of our long-term debt obligations (denominated in U.S. dollars) and foreign exchange gain or loss of our highly probable U.S. dollar denominated future export revenues, so that gains or losses associated with the hedged transaction (the highly probable future exports) and the hedging instrument (debt obligations) are recognized in the statement of income in the same periods.

For more information about our cash flow hedge, see Notes 4.8 and 38.3(a) to our audited consolidated financial statements.

For information about our related foreign exchange exposure related, see “Liquidity and Capital Resources – Exposure to Interest Rate and Exchange Rate Risk” in this section.

For more information about our foreign exchange exposure related to assets and liabilities, see Note 38.3(c) to our audited consolidated financial statements.

## Sales Revenues

### 2020 compared to 2019

In 2020, although total sales volume increased, given that a steep increase in exports (30% YoY) more than compensated for the drop in demand in Brazil, net revenues decreased by 30% compared to 2019 due to the drop in Brent prices (35%) and in the sales of oil products, with higher added value than crude oil.

Sales revenues were US\$53,683 million in 2020, a 30% decrease when compared to US\$76,589 million in 2019, mainly due to:

- Decrease in domestic revenues (US\$19,660 million), mainly as a result of:
  - a) decrease in oil products revenues (US\$16,637 million) primarily reflecting a decrease in the average prices of diesel and gasoline due to the drop of Brent prices as well as lower sales volume of gasoline, diesel and jet fuel, reflecting the effects of the pandemic; and
  - b) lower natural gas revenues (US\$2,280 million), primarily reflecting lower demand from the thermoelectric market.

- Decreased export revenues (US\$2,140 million), mainly driven by lower Brent prices. This effect was partially offset by higher crude oil and oil product export volumes.
- Decreased revenues from operations abroad (US\$1,106 million) mainly due to the sale of the Pasadena refinery and the distribution companies in Paraguay, lower international prices and the effects of the pandemic.

## 2019 compared to 2018

Sales revenues were US\$76,589 million in 2019, a 10% decrease (US\$8,049 million) when compared to US\$84,638 million in 2018, mainly due to:

- Decrease in domestic revenues (US\$6,591 million), mainly as a result of:
  - a) decrease in oil products revenues (US\$5,797 million) primarily reflecting a decrease in the average prices of diesel, gasoline and naphtha when expressed in U.S. dollars, following lower international prices, as well as lower sales of gasoline (mainly due to higher third-party imports and to the higher portion of ethanol in fuel market), decreased sales of naphtha to Braskem, lower sales of diesel (mainly due to higher imports by other players, increased average content of biodiesel, partially offset by the trucker strike in May 2018 and by higher economic growth) and decreased fuel oil sales (as a result of lower sales to thermoelectric plants);
  - b) lower electricity revenues (US\$705 million), primarily reflecting the decrease of difference settlement prices;
  - c) partial offset by higher natural gas revenues (US\$504 million), following contract price adjustments mainly;
- Increased export revenues (US\$2,672 million), mainly driven by higher crude oil export volumes, following increased domestic crude oil production, and by higher oil products export volumes, mainly gasoline and fuel oil; and
- Decreased revenues from operations abroad (US\$4,130 million) mainly due to the sale of the Pasadena refinery, to the sale of E&P assets of PAI and the distribution companies in Paraguay.



## Sales volumes and prices

As a vertically integrated company, we process most of our crude oil production in our refineries and sell the refined oil products primarily in the Brazilian market. Therefore, the price of oil products in Brazil has a significant impact on our financial results. International oil product prices vary over time as the result of many factors, including the price of crude oil. We seek to sell our products in Brazil at par with international product prices, when possible. The announced divestment plan will contribute to improve the capital allocation and, consequently, also the shareholder value creation.

The average price of Brent Crude Oil (as reported by Bloomberg, an international benchmark of oil prices) was US\$42 per barrel in 2020, US\$64 per barrel in 2019 and US\$71 per barrel in 2018. As of December 31, 2020, Brent Crude Oil prices averaged US\$50 per barrel.

During 2020, 67.7% of our sales revenues were from sales of oil products, natural gas and other products in Brazil, compared to 73.1% in 2019 and 73.9% in 2018.

	For the year ended December 31								
	2020			2019			2018		
	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$) <sup>(2)</sup>	Sales Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$) <sup>(2)</sup>	Sales Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$) <sup>(2)</sup>	Sales Revenues (US\$ million)
Diesel <sup>(1)</sup>	251,400	55.39	13,924	264,462	87.00	23,007	266,706	93.23	24,865
Automotive gasoline	125,536	50.29	6,313	137,928	71.12	9,810	146,681	79.70	11,690
Fuel oil (including bunker fuel)	14,669	54.20	795	14,408	71.21	1,026	16,846	73.19	1,233
Naphtha	42,544	39.82	1,694	29,942	55.74	1,669	35,296	69.55	2,455
Liquefied petroleum gas	86,170	39.26	3,383	83,486	49.82	4,159	84,371	53.22	4,490
Jet fuel	21,887	66.48	1,455	43,528	88.04	3,832	44,731	94.07	4,208
Other oil products	66,470	40.80	2,712	60,453	56.41	3,410	57,380	65.68	3,769
<b>Subtotal oil products</b>	<b>608,676</b>	<b>49.74</b>	<b>30,276</b>	<b>634,207</b>	<b>73.97</b>	<b>46,913</b>	<b>652,011</b>	<b>80.84</b>	<b>52,710</b>
Natural gas (boe)	106,890	34.14	3,649	127,583	46.47	5,929	125,787	43.13	5,425
Ethanol, nitrogen products, renewables and other non-oil products	2,899	20.35	59	2,621	93.48	245	6,156	59.45	366
Electricity, services and others	—	—	2,350	—	—	2,907	—	—	4,084
<b>Total Brazilian market</b>	<b>718,465</b>	<b>—</b>	<b>36,334</b>	<b>764,411</b>	<b>—</b>	<b>55,994</b>	<b>783,954</b>	<b>—</b>	<b>62,585</b>
Exports	350,090	45.55	15,945	268,344	67.39	18,085	216,838	71.08	15,413
International sales	31,190	45.02	1,404	36,885	68.05	2,510	85,815	77.38	6,640
<b>Total global market</b>	<b>381,280</b>	<b>—</b>	<b>17,349</b>	<b>305,229</b>	<b>—</b>	<b>20,595</b>	<b>302,654</b>	<b>—</b>	<b>22,053</b>
<b>CONSOLIDATED SALES REVENUES</b>	<b>1,099,745</b>	<b>—</b>	<b>53,683</b>	<b>1,069,640</b>	<b>—</b>	<b>76,589</b>	<b>1,086,608</b>	<b>—</b>	<b>84,638</b>

(1) In 2018, this line item includes revenues related to the Diesel Price Subsidy Program.

(2) Net average price calculated by dividing sales revenues by the volume for the year.

## Cost of Sales

### 2020 compared to 2019

Cost of Sales (“COGS”) was US\$29,195 million in 2020, a 36% decrease compared to US\$45,732 million in 2019, following the decrease in oil products production and lower Brent prices, mainly due to:

- Lower import costs and production taxes, following the lower Brent prices; and
- The higher share of pre-salt assets in the production mix and lower lifting costs, that enabled the reduction of crude oil production costs despite higher production volumes.

It also contributed to the decrease of operations abroad, as well as to the lower production costs and lower costs from operations abroad, following the sale of distribution companies in Paraguay and the sale of the Pasadena refinery.

### 2019 compared to 2018

Cost of sales was US\$45,732 million in 2019, a 12% decrease (US\$6,452 million) compared to US\$52,184 million in 2018, mainly due to:

- Lower production costs and lower costs from operations abroad, following the sale of E&P assets of PAI, the sale of distribution companies in Paraguay and the sale of the Pasadena refinery;
- Decreased electricity costs due to lower thermoelectric demand;
- Partial offset by higher import costs and increased domestic crude oil acquisitions, generating higher share of crude oil imports on feedstock processed and of natural gas, following increased prices; and
- Foreign exchange conversion effects partially offset the aforementioned factors due to the decrease of the average cost of sales when expressed in U.S. dollars, reflecting the depreciation of the average *real*.

## Selling Expenses

### 2020 compared to 2019

Selling expenses were US\$4,884 million in 2020, a 9% increase (US\$408 million) compared to US\$4,476 million in 2019, mainly due to increased oil product and crude oil export volumes and an increase in international freight costs, as well as higher transportation costs, as a result of fee payments for the use of third-party gas pipelines, following the sale of TAG in June 2019.

### 2019 compared to 2018

Selling expenses were US\$4,476 million in 2019, a 17% increase (US\$649 million) compared to US\$3,827 million in 2018, mainly due to higher transportation costs, as a result of fee payments for the use of third-party gas pipelines following the sale of TAG in June 2019, and also increased oil product and crude oil export volumes.

## General and Administrative Expenses

### 2020 compared to 2019

General and administrative expenses were US\$1,090 million in 2020, a 48.7% decrease (US\$1,034 million) compared to US\$2,124 million in 2019, mainly due to foreign exchange translation effects that resulted in decreased average general and administrative expenses, reflecting the depreciation of the average Brazilian *real*, resilience measures and the effect of the gains on the actuarial review of our health care plan.

### 2019 compared to 2018

General and administrative expenses were US\$2,124 million in 2019, a 5% decrease (US\$115 million) compared to US\$2,239 million in 2018, mainly due to foreign exchange translation effects that resulted in decreased average general and administrative expenses, reflecting the depreciation of the average Brazilian *real*, partially offset by higher personnel expenses following wage increases from the collective bargaining agreement in the 4Q18 and from higher wages and promotion of employees, as well as the actuarial review of health care and pension plans.

## Exploration Costs

### 2020 compared to 2019

Exploration costs were US\$803 million in 2020, the same level when compared to US\$799 million in 2019.

### 2019 compared to 2018

Exploration costs were US\$799 million in 2019, a 52% increase (US\$275 million) compared to US\$524 million in 2018, mainly due to higher exploration expenditures written-off with projects without commercial feasibility and increased geological and geophysical expenses.

## Impairment of Assets

### 2020 compared to 2019

We recognized impairment of assets in the amount of US\$7,339 million in 2020, a 157% increase (US\$4,491 million) compared to US\$2,848 million in 2019 mainly for E&P assets (US\$7,316 million). Impairment losses on producing properties in Brazil amounted to US\$7,083 million, most of it related to CGUs that provide service in E&P fields, also reflecting the hibernation of producing assets in the first quarter of 2020, as well as the revision on the key assumptions of the Strategic Plan, mainly expected Brent prices, depreciation of the Brazilian *real* against U.S. dollar, economic slowdown and reduction in the demand for oil and oil products.

### 2019 compared to 2018

We recognized impairment of assets in the amount of US\$2,848 million in 2019 compared to US\$2,005 million in 2018, mainly for E&P and Refining assets (US\$1,956 million and US\$697 million, respectively), mainly due to significant reduction in the prices of oil and natural gas projected for the 2021-2025 period and the increase in the provision for the dismantling of areas, due to the reduction in risk-free discount rates, and to changes in the schedule for removal and treatment of oil and gas production facilities. The higher estimates of decommissioning costs of E&P fields in Brazil are notably in cash generating units of Papa-Terra, in Campos Basin, in the Uruguá group (Uruguá and Tambaú fields), in Santos Basin, in the Canapu and Golfinho fields and in the Espirito Santo Basin, partially offset by the effects of reversals relating to the sale of producing fields in Brazil. In addition, we accounted for impairment losses in 2019 due to the postponing of a project to conclude the second refining unit of RNEST, and also due to the writing-off of UFN-III, following our decision to forego the conclusion of this plant. In 2018, we recognized impairment of assets in the amount of US\$2,005 million mainly for E&P and Refining assets (US\$1,391 million and US\$442 million, respectively), primarily driven by higher estimates of decommissioning costs in producing properties in Brazil, the sale of production fields in Gulf of Mexico and lower freight rate forecasts pertaining to transportation assets.

## Other Income and Expenses

### 2020 compared to 2019

Other income and expenses totaled income of US\$998 million in 2020, compared to an income of US\$1,199 million in 2019, mainly due to higher disposal and write-off of assets in 2019 (US\$5,547 million), the voluntary severance programs (US\$819 million), offset by the recovery of PIS / COFINS (VAT excluded from the calculation base) (US\$1,514 million); equalization of expenses related to production individualization agreements (US\$699 million), gains on health care plan actuarial review (US\$2,164 million); legal proceedings (US\$1,089 million) and the variable compensation program (US\$204 million).

### 2019 compared to 2018

Other income and expenses totaled income of US\$1,199 million in 2019, compared to an expense of US\$5,760 million in 2018, mainly due to:

- Higher net gains on the sale and write-off of assets (US\$5,630 million), as a result of:
  - a) Gain from the sale of TAG (US\$5,458 million);
  - b) Gain on the sale of Pargo, Carapeba and Vermelho fields, mainly with the write-off of provision for abandoned areas, as a result of the assumption by the buyer of expenses for the decommissioning of areas related to the fields (US\$787 million);
  - c) Gain on the sale of Riacho da Forquilha Complex (34 onshore producing fields on Potiguar Basin) (US\$221 million);
  - d) Gain on the sale of distribution companies in Paraguay (US\$141 million);
  - e) Gains in 2018, on sale of Lapa and Lara fields (US\$689 million) and by the contingent payment received for the sale of Carcará area (US\$300 million); and
  - f) Loss on the sale of Tartaruga Verde field and Module III of Espadarte field (US\$74 million).
- Lower expenses in 2019 with the Employee Career and Compensation Plan – PCR (a US\$2 million expense in 2019 when compared to a US\$293 million expense in 2018);
- Lower equalization of expenses related to production individualization agreements, which provide for equalization of expenses and production volumes related to Sapinhoá, Tupi, Tartaruga Verde, Berbigão and Sururu fields (a US\$2 million income in 2019 when compared to a US\$279 million expense in 2018); and
- A lower provision for legal, administrative and arbitration proceedings (a US\$1,520 million expense in 2019 when compared to a US\$2,283 million expense in 2019), mainly due to:
  - a) Unitization agreements with the ANP related to the Parque das Baleias complex entered into in 4Q18 (US\$928 million);
  - b) Agreement to settle Lava Jato Investigation with U.S. authorities (US\$895 million) in the 3Q18;

- c) Arbitration in the United States for drilling service agreement related to Titanium Explorer (Vantage) drillship in 2018 (US\$698 million);
- d) Lower foreign exchange losses over class action liability exposure in U.S. dollar, as a result of decreased depreciation of the Brazilian *real* against the U.S. dollar between the years, with definitive termination of the agreement in September 2019 (US\$336 million);
- e) Provision related to the arbitration of Sete Brasil quotaholders in 2019 (US\$740 million);
- f) Reversal of disputes involving state taxes after joining Rio de Janeiro State Tax Amnesty Program in the 4Q18 (US\$319 million); and
- g) Provision due to the environmental accident in the State of Paraná with the OSPAR pipeline in the 3Q19 (Santa Catarina – Paraná Pipeline – US\$155 million).

These gains were partially offset by:

- Higher expenses with decommissioning of returned/ abandoned areas (US\$155 million in expenses in 2019 compared to a US\$621 million reversal of expense in 2018);
- Lower amounts recovered from Lava Jato investigation (a US\$220 million income in 2019 when compared to a US\$457 million income in 2018); and
- Higher expenses with the Voluntary Separation Program, or PDV (a US\$198 million expense in 2019 compared to a US\$2 million reversal of expenses in 2018).

## Net Finance Income (Expense)

### 2020 compared to 2019

Net finance expense was US\$9,630 million in 2020, a 10% increase (US\$866 million) when compared to US\$8,764 million in 2019, mainly due to:

- The increase in hedge accounting expense of US\$1,584 million, reflecting higher exports in the period and an additional loss on hedge instruments due to exports that are no longer foreseen;
- the depreciation of the *real* against the U.S. dollar and negative net foreign exchange exposure, which increased the net finance expense in US\$1,291 million, due to the exchange rate fluctuation;
- the reduction in financial expenses of US\$1,082 million due to lower interest payments
- higher premium payment on the repurchase of debt securities (US\$ 297 million); and
- partial offset by monetary restatement on PIS / COFINS gains (US\$1,709 million).

## 2019 compared to 2018

Net finance expense was US\$8,764 million in 2019, a 35% increase (US\$2,280 million) when compared to the expense of US\$6,484 million in 2018, mainly due to:

- Increased unwinding of discount on lease liabilities, due to the effects of the adoption of IFRS 16 (US\$1,504 million);
- Decreased gains from signed agreements in the electric sector (a US\$79 million gain in 2019 compared to a US\$724 million gain in 2018);
- Higher net costs on repurchase of debt securities (US\$527 million);
- Lower capitalized borrowing costs, as a result of decreased balance of assets under construction (US\$482 million);
- Higher unwinding of discount on the provision for decommissioning costs (US\$143 million), as a result of higher balance to be abandoned; and
- Partially offset by lower interest on finance debt (US\$1,073 million), mainly due to lower average debt, generating decreased interest expenses.

## Results in equity-accounted investments

### 2020 compared to 2019

We experienced a loss in equity-accounted investments of US\$659 million in 2020, compared to an income of US\$153 million in 2019. This variation is explained by the decreased result in Braskem due to legal proceedings related to activities at the rock salt mining in Alagoas and currency depreciation; and impairment losses in BR Distribuidora triggered by our decision to sell our remaining shares. The recoverable value of this investment took into account the value in use, including the disposal value, considering our intention to sell the shares.

### 2019 compared to 2018

We experienced income in equity-accounted investments of US\$153 million in 2019, a 71% decrease (US\$370 million) compared to US\$523 million in 2018, mainly as a result of the decreased result in Braskem, due to legal proceedings related to activities at the rock salt mining in Alagoas, partially offset by the positive result of BR Distribuidora, as a result of the follow-on transaction in July 2019 which led to its classification as an equity-accounted investment.

## Income Taxes

### 2020 compared to 2019

Income tax was a benefit of US\$1,174 million in 2020, compared to expenses of US\$4,200 million in 2019, mainly due to higher impairment and foreign exchange losses.

### 2019 compared to 2018

Income tax expenses were US\$4,200 million in 2019, a 1% decrease (US\$56 million) compared to US\$4,256 million in 2018, remaining relatively flat during the year. The effective tax rate based on our results decreased to 35.0% from 39.3% in 2018.

## Results of Discontinued Operations

### 2020 compared to 2019

Net income from discontinued operations in 2020 was US\$0 compared to US\$2,560 million in 2019, mainly due to the gains arising from the follow-on offering of BR Distribuidora in July 2019, after which we no longer controlled BR Distribuidora.

### 2019 compared to 2018

Net income from discontinued operations in 2019 was US\$2,560 million, a 204% increase (US\$1,717 million) compared to US\$843 million in 2018, mainly due to the gains arising from the follow-on offering of BR Distribuidora in July 2019.

# Financial Performance by Business Segment

## SELECTED FINANCIAL DATA BY REPORTABLE OPERATING SEGMENTS AND FOR CORPORATE AND OTHER BUSINESS

	For the year ended December 31			
	2020 (US\$ million)	2019 (US\$ million)	▲ 20-19 (%)	2018 (US\$ million)
<b>Exploration and Production</b>				
Sales revenues to third parties <sup>(1)(2)</sup>	871	1,062	(18)%	2,330
Intersegment sales revenues	33,524	49,400	(32) %	50,052
<b>Total sales revenues<sup>(2)</sup></b>	<b>34,395</b>	<b>50,462</b>	<b>(32) %</b>	<b>52,382</b>
Net income (loss) attributable to our shareholders	4,475	12,624	(65) %	12,190
Capital Expenditures <sup>(3)</sup>	6,557	25,081	(74)%	11,592
Property, plant and equipment	95,222	122,496	(22) %	116,153
<b>Refining, Transportation and Marketing</b>				
Sales revenues to third parties <sup>(1)(2)</sup>	46,917	58,106	(19) %	56,793
Intersegment sales revenues	865	9,432	(91) %	16,655
<b>Total sales revenues<sup>(2)</sup></b>	<b>47,782</b>	<b>67,528</b>	<b>(29) %</b>	<b>73,448</b>
Net income (loss) attributable to our shareholders	111	1,021	(89) %	2,393
Capital Expenditures <sup>(3)</sup>	947	1,463	(35)%	1,107
Property, plant and equipment	20,842	26,710	(22) %	27,356
<b>Gas and Power</b>				
Sales revenues to third parties <sup>(1)(2)</sup>	5,270	8,185	(36) %	8,540
Intersegment sales revenues	2,455	3,308	(26) %	3,701
<b>Total sales revenues<sup>(2)</sup></b>	<b>7,725</b>	<b>11,493</b>	<b>(33) %</b>	<b>12,241</b>
Net income (loss) attributable to our shareholders	821	4,180	(80) %	482
Capital Expenditures <sup>(3)</sup>	353	543	(35)%	433
Property, plant and equipment	6,614	8,181	(19) %	11,057
<b>Corporate and other Businesses</b>				
Sales revenues to third parties <sup>(1)(2)</sup>	625	995	(37) %	1,526
Intersegment sales revenues	251	226	11 %	205
<b>Total sales revenues<sup>(2)</sup></b>	<b>876</b>	<b>1,221</b>	<b>(28) %</b>	<b>1,731</b>
Net income (loss) attributable to our shareholders	(4,670)	(6,273)	(26) %	(7,382)
Capital Expenditures <sup>(3)</sup>	200	326	(39)%	307
Property, plant and equipment	1,523	1,915	(20) %	2,856

(1) Not all of our segments have significant third-party revenues. For example, our Exploration and Production segment accounts for a large part of our economic activity and capital expenditures, but has little third-party revenues.

(2) Revenues from commercialization of oil to third parties are classified in accordance with the points of sale, which could be either the Exploration and Production or Refining, Transportation and Marketing segments.

(3) See definition of Capital Expenditures in "Glossary of Certain Terms Used in this Annual Report."

## Exploration and Production

### 2020 compared to 2019

Net income attributable to our shareholders in our E&P segment was US\$4,475 million in 2020 compared to US\$12,624 million in 2019, primarily due to:

- lower revenues (a decrease of US\$16,068 million), due to the drop in average Brent oil prices of US\$22.6/bbl (2019: US\$64.3/bbl; 2020: US\$41.7/bbl), a 35% decrease when compared to 2019, partially offset by the increase in production of 66 mboed (2019: 2,770 mboed; 2020: 2,836 mboed);
- lower cost of sales (a decrease of US\$9,207 million), mainly due to lower taxes given the decrease in Brent prices and lower operating costs mainly due to currency depreciation, reduction of operating expenses and asset management with hibernation of platforms in shallow water; and
- higher impairment losses (an increase of US\$5,428 million). See Note 25 to our audited consolidated financial statements for further information about impairment losses.

### 2019 compared to 2018

Net income attributable to our shareholders in our E&P segment was US\$12,624 million in 2019 compared to US\$12,190 million in 2018, primarily due to:

- lower revenues (a decrease of US\$1,920 million), due to the drop in average Brent oil prices (US\$6.7/bbl), a 10% decrease when compared to 2018, partially offset by the increase in production (142 mboed);
- lower cost of sales (a decrease of US\$1,664 million), mainly due to lower taxes given the decrease in Brent prices and lower operating costs;
- lower expenses with legal contingencies (a decrease of US\$1,521 million) and higher gain on divestments (an increase of US\$464 million);
- higher impairment losses (an increase of US\$561 million). See Note 25 to our audited consolidated financial statements for further information about impairment losses; and
- higher exploratory expenses (an increase of US\$275 million).

## Refining, Transportation and Marketing

### 2020 compared to 2019

Net income attributable to our shareholders in our RTM segment was US\$111 million in 2020 compared to US\$1,021 million in 2019, primarily due to:

- lower operating income due to lower margins of diesel (a decrease of US\$2,627 million) and lower margins and volumes of jet fuel (a decrease of US\$669 million) sold in the Brazilian market, lower margins in exports of crude oil (a decrease of US\$504 million) and negative effect of inventory turnover (sale of inventories formed at lower prices) between the years of US\$1,333 million. These factors were partially offset by higher volumes and margins of LPG and naphtha sold in the Brazilian market (an increase of US\$851 million) and higher exports of fuel oil (US\$419 million); and
- higher selling expenses mainly due to the increase in shipping expenses (an increase of US\$356 million), reversal of impairments of US\$260 million at COMPERJ, partially offset by an impairment at RNEST of US\$22 million (a decrease of US\$861 million impairment losses, net of reversals), and positive result with the sale of Liquigás (an increase of US\$531 million).

### 2019 compared to 2018

Net income attributable to our shareholders in our RTM segment was US\$1,021 million in 2019 compared to US\$2,393 million in 2018, primarily due to:

- lower operating income due to lower margins and volumes of diesel (a decrease of US\$285 million) and gasoline (a decrease of US\$622 million) sold in the Brazilian market, the exchange translation effect, and the reduction in the positive effect of inventory turnover of US\$800 million. These factors were partially offset by higher volumes and margins in exports of fuel oil (by US\$274 million) and crude oil (by US\$361 million); and
- higher selling expenses (an increase of US\$387 million), increase in impairment losses, net of reversals (US\$255 million), mainly at RNEST, COMPERJ and Pasadena and higher expenses with provisions for legal proceedings (an increase of US\$416 million) mainly contingencies related to the Ospar pipeline and adherence to the tax amnesty program in the state of Bahia.

The refining unit cost, an important measure to this segment, decreased by US\$0.05/bbl due to lower personnel costs in U.S. dollars combined with the exchange rate variation during the period.

## Gas and Power

### 2020 compared to 2019

Net income attributable to our shareholders in our Gas and Power segment was US\$821 million in 2020 compared to US\$4,180 million in 2019. Operating income decreased due to the sale of our 90% interest in Transportadora Asociada de Gás S.A. (TAG) in June 2019 with a US\$5,458 million gain and higher selling expenses due to transport tariff for the TAG gas pipelines.

### 2019 compared to 2018

Net income attributable to our shareholders in our Gas and Power segment was US\$4,180 million in 2019 compared to US\$482 million in 2018. Operating income increased due to the sale of our 90% interest in Transportadora Asociada de Gás S.A. (TAG) in June 2019 with a US\$5,458 million gain, including the remeasurement of our remaining interest in the amount of US\$546 million under other income and expenses, partially offset by higher selling expenses in the amount of US\$760 million.

# Liquidity and Capital Resources

## LIQUIDITY AND CAPITAL RESOURCES

US\$ million	2020	2019
<b>Adjusted Cash and Cash Equivalents at the beginning of period <sup>(1)</sup></b>	<b>8,265</b>	<b>14,982</b>
Government bonds and time deposits with maturities of more than three months at the beginning of period	(888)	(1,083)
<b>Cash and cash equivalents at the beginning of period</b>	<b>7,377</b>	<b>13,899</b>
Net cash provided by (used in) operating activities	28,890	25,600
Net cash provided by operating activities from continuing operations	28,890	25,277
Discontinued operations – net cash provided by operating activities	–	323
Net cash provided by (used in) investing activities	(4,510)	(1,684)
Net cash provided by (used in) investing activities from continuing operations	(4,510)	(3,496)
Acquisition of PP&E and intangibles assets (except for the Transfer of Rights surplus and other signature bonus) and investments in investees	(6,816)	(7,224)
Signature bonus	–	(1,339)
Transfer of Rights surplus	–	(15,341)
Proceeds from disposal of assets – Divestment	1,997	10,413
Reimbursement of Transfer of rights agreement	–	8,361
Dividends received	243	1,436
Divestment (Investment) in marketable securities	66	198
Discontinued operations – net cash provided by (used in) investing activities	–	1,812
<b>(=) Net cash provided by operating and investing activities</b>	<b>24,371</b>	<b>23,916</b>
<b>Net cash provided by (used) in financing activities from continuing operations</b>	<b>(19,259)</b>	<b>(31,561)</b>
Net financings	(11,861)	(24,310)
Proceeds from financing	17,023	7,464
Repayments	(28,884)	(31,774)
Repayment of lease liability	(5,880)	(5,207)
Dividends paid to shareholders of Petrobras	(1,367)	(1,877)
Dividends paid to non-controlling interest	(84)	(138)
Investments by non-controlling interest	(67)	(29)
Discontinued operations – net cash used in financing activities	–	(508)
Net cash provided by (used) in financing activities	(19,259)	(32,069)
Effect of exchange rate changes on cash and cash equivalents	(773)	1,631
<b>Cash and cash equivalents at the end of period</b>	<b>11,725</b>	<b>7,377</b>
Government bonds and time deposits with maturities of more than three months at the end of period	659	888
<b>Adjusted Cash and Cash Equivalents at the end of period <sup>(1)</sup></b>	<b>12,384</b>	<b>8,265</b>

(1) Adjusted Cash and Cash Equivalents is a non-GAAP measure that comprises cash and cash equivalents, government bonds and time deposits from highly rated financial institutions abroad with maturities of more than three months from the end of the period, considering the expected realization of those financial investments in the short-term. This measure is not defined under the International Financial Reporting Standards – IFRS and should not be considered in isolation or as a substitute for cash and cash equivalents computed in accordance with IFRS. It may not be comparable to adjusted cash and cash equivalents of other companies, however management believes that it is an appropriate supplemental measure to assess our liquidity and supports leverage management.



## Free Cash Flow

We use Free Cash Flow as a supplemental measure to assess our liquidity and to support liability management.

Free Cash Flow is not defined under IFRS and should not be considered in isolation or as a substitute for cash and cash equivalents calculated in accordance with IFRS. Additionally, it may not be comparable to the Free Cash Flow of other companies.

Our Free Cash Flow metric comprises net cash provided by operating activities less acquisition of PP&E, intangibles assets (except for signature bonus, including the bidding for oil surplus of the Transfer of Rights Agreement, paid for obtaining concessions for exploration of crude oil and natural gas) and investments in investees, as presented below:

### RECONCILIATION OF FREE CASH FLOW

	Jan-Dec	
	2020	2019
Net cash provided by operating activities assets	28,890	25,600
(-) Acquisition of PP&E and intangible assets (except for the bidding for oil surplus of the Transfer of Rights Agreement)	(5,874)	(8,556)
(+) Other signature bonuses paid for exploration of crude oil and natural gas <sup>(1)</sup>	-	1,339
(-) Investments in investees	(942)	(7)
<b>FREE CASH FLOW</b>	<b>22,074</b>	<b>18,376</b>

(1) Signature bonuses paid for Concession and Production sharing regimes, included in "Acquisition of PP&E and intangibles assets".

The principal uses of funds in the year ended December 31, 2020 were for debt service obligations, including pre-payment of debts in the national and international banking market, repurchase and redemption of securities in the international capital market and lease payments totaling US\$34,764, acquisition of PP&E and intangibles assets in the amount of US\$5,874 and investments in investees amounting to US\$942 (mainly relating to the acquisition of additional interest in shares in Tupi B.V. and Iara B.V. in the amount of US\$889). These funds were principally provided by cash from operating activities of US\$28,890, proceeds from divestments of US\$1,997 and a set of measures to reduce cash outflows and preserve cash, in order to reinforce our business financial strength and resilience. The negative exchange rate effect on the balances of cash and cash equivalents resulting from investments abroad was US\$773.

## Source of Funds

In 2020, our financing strategy was to fund our necessary capital expenditures and to continue our debt deleveraging process, preserving our cash balance, solvency and liquidity.

We pursued our financing strategy in 2020 in the following ways:

- using cash flow from operations;
- moving forward with our portfolio management program and continuing with divestments; and
- moving forward with our liability management program, incurring new debt from funding sources to prepay expensive loans with certain of our creditors.

## Cash Flows from Operating Activities

Net cash provided by operating activities was US\$28,890 million in 2020, an increase of 13% from US\$25,600 million in 2019, mainly due to greater integration of logistics, marketing and sales, the production records and inventory management, resulting in increased exports, and the use of tax credits.

## Disposal of Assets

We received cash inflow from the sale of assets amounting to US\$1.997 billion, as of December 31, 2020, which represents the prices paid to us on the closing of the completed transactions and the prepayments related to certain transactions that have not yet been closed.

Assets	Cash -inflow (US\$ billion)
Sale of the corporate ownership held by Petrobras (50%) in the company Petrobras Oil & Gas BV ("PO&G BV") and a deferred payment	0.301
Sale of the Macau complex	0.125
Sale of the Pampo and Enchova Hubs	0.365
Sale of the entire stake in the Ponta do Mel and Redonda onshore fields	0.003
Sale of the remaining stake (10%) held in Transportadora Associada de Gás S.A. (TAG) and dividends received	0.205
Sale of the entire stake in the onshore fields of Lagoa Parda Hub	0.009
Sale of 100% stake in the Baúna field	0.150
Sale of the entire stake in the Tucano Sul Hub	0.003
Full sale of equity interest in Liquigás Distribuidora SA	0.780
Others	0.056
<b>TOTAL</b>	<b>1.997</b>

As of March 12, 2021, we have received US\$ 0.11 billion, mainly due to the sale of the entire stake of Petrobras Uruguay Distribución and Frade field.

For additional information on divestments, see "Portfolio Management" in this annual report.

## Debt

Our proceeds from financing are comprised of local and global notes issued in the capital markets, funds raised from banking markets (in Brazil and abroad) and use of revolving credit lines.

Additionally, our total debt includes lease liabilities. Our Gross Debt totaled US\$75,538 million, and the Net Debt, representing the sum of short and long-term loans and financing and lease liabilities, deducted by cash and cash equivalents, Brazilian federal government securities and time deposits maturing over three months totaled US\$63,168 million.

For reconciliation of Net Debt and Gross Debt, non-GAAP measures, see “- Liquidity and Capital Resources – Sources of Funds – Finance Debt - Adjusted EBITDA and Net Debt/Adjusted EBITDA ratio” in this annual report.

## Finance Debt

### Debt profile

In 2020, proceeds from financing amounted to US\$17,023 million, principally reflecting: (i) funds raised from banking market (in Brazil and abroad), in the amount of US\$3,153 million, (ii) use of revolving credit lines, in the amount of US\$8,010 million and (iii) global notes issued in the international capital market in the amount of US\$4,300 million of which US\$2,588 million relates to the issue, and reopening, of new bonds maturing in 2031 and the remaining US\$1,712 million relates to new bonds issued maturing in 2050.

We currently issue notes in the international capital markets through our wholly-owned finance subsidiary PGF. We fully and unconditionally guarantee such notes issued by PGF, and PGF is not required to file periodic reports with the SEC. See Note 39 to our audited consolidated financial statements.

In order to protect ourselves from the current crisis relating to the Covid-19 pandemic and the volatility in oil prices, we drew down our revolving credit lines amounting to approximately US\$8,010 million.

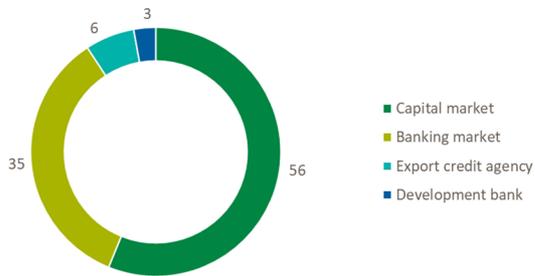
For additional information on Finance Debt amortization, see “Debt Service Obligations” in this annual report.

The average cost of our finance debt remained below 6.0% per year, reaching 5.9% per year. Meanwhile, the average duration increased from 10.79 years in December 2019 to 11.71 years in December 2020.

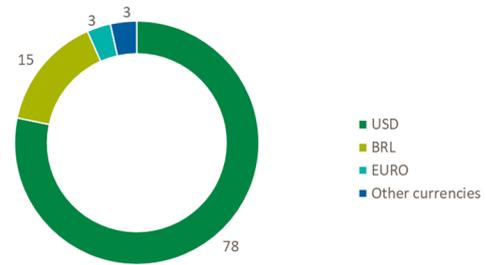
	2020	2019	2018
Average interest rate (%)	5.9	5.9	6.1
Weighted average maturity (in years)	11.71	10.79	9.14
Leverage (%) <sup>(1)</sup>	46	44	46

(1) This leverage takes into account market capitalization. Considering book value of Equity, the leverage is 51% for 2020, 52% for 2019 and 49% for 2018 and it is defined as (Gross Debt – Cash Equivalents) / (Equity + Gross Debt – Cash Equivalents).

DEBT PROFILE PER CATEGORY (%)



DEBT PROFILE PER CURRENCY (%)



As of December 31, 2020, our finance debt due in the short-term, including accrued interest, amounted to US\$4,186 million, compared to US\$4,469 million as of December 31, 2019.

Our outstanding long-term finance debt amounted to US\$49,702 million as of December 31, 2020, compared to US\$58,791 million as of December 31, 2019. This decrease was primarily due to repurchase of global bonds and pre-payment of debt.

See Note 34 to our audited consolidated financial statements for a breakdown of our finance debt, a roll-forward schedule of our finance debt by source and other information.

For more information about our securities, including our bonds, see Exhibit 2.4 to this annual report.



## Rating

We are rated by the three major rating agencies (S&P, Moody's and Fitch). Our ratings are based on our financial health and are highly influenced by the Brazilian sovereign rating.

In 2020, S&P and Moody's maintained and Fitch upgraded our stand-alone credit profile ratings (S&P at BB; Moody's at Ba2 and Fitch upgraded by two notches, from BB+ to BBB, second level of investment grade). We also had our global rating perspective downgraded from positive to stable by S&P and from stable to negative by Fitch, while Moody's kept us on a stable perspective basis during the year. There were no changes on our global rating in 2020 by S&P, Moody's and Fitch, (BB-, Ba2 and BB-, respectively). As of February 28, 2021, there were no changes to our stand-alone credit profile rating or to our global rating.

### GLOBAL RATING

	2021 <sup>(1)</sup>	2020 <sup>(2)</sup>	2019 <sup>(2)</sup>
Standard & Poor's	BB-	BB-	BB-
Moody's	Ba2	Ba2	Ba2
Fitch	BB-	BB-	BB-

(1) As of February 28, 2021.

(2) As of December 31, 2020.

### STAND ALONE RATING

	2021 <sup>(1)</sup>	2020 <sup>(2)</sup>	2019 <sup>(2)</sup>
Standard & Poor's	BB	BB	BB
Moody's	Ba2	Ba2	Ba2
Fitch	BBB	BBB	BB+

(1) As of February 28, 2021.

(2) As of December 31, 2020.



## Exposure to interest rate and exchange rate risk

The table below provides a summary with information regarding our exposure to interest rate and exchange rate risk in our total finance debt portfolio for 2020 and 2019, including short-term and long-term debt.

### TOTAL FINANCE DEBT PORTFOLIO <sup>(1)</sup>

	2020 (%)	2019 (%)	2018 (%)
<b>Real - denominated</b>			
Fixed rate	5.1	6.0	3.2
Floating rate	10.0	10.6	15.8
Sub-total	15.1	16.6	19.0
<b>U.S. dollar - denominated</b>			
Fixed rate	46.4	44.8	40.4
Floating rate	31.9	31.5	33.8
Sub-total	78.3	76.3	74.2
<b>Other currencies</b>			
Fixed rate	6.6	7.1	6.6
Floating rate	0.0	0.0	0.2
Sub-total	6.6	7.1	6.8
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Floating rate debt</b>			
<i>Real</i> -denominated	10.0	10.6	15.8
Foreign currency-denominated	31.9	31.5	34.0
<b>Fixed rate debt</b>			
<i>Real</i> -denominated	5.1	6.0	3.2
Foreign currency denominated	53.0	51.9	47.0
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
U.S. dollars	78.3	76.3	74.2
Euro	3.1	4.0	4.2
GBP	3.5	3.0	2.6
Japanese Yen	0.0	0.0	0.0
Brazilian <i>reais</i>	15.1	16.7	19.0
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(1) Short term and long term.

We practice integrated risk management in every decision-making process. Thus, we do not focus solely on the individual risks of our operations or business units, but, rather, we take a broader view of our consolidated activities, capturing possible natural hedges where and when available. With respect to the management of financial risks, including market risks, we use more structural actions through the management of our equity and indebtedness levels, instead of using financial derivative instruments.

Market risk management focuses on the uncertainties inherent in meeting our objectives and aims at establishing action plans towards a balanced combination of risk, return and liquidity. Acceptable limits for market risks depend on the conditions of the business environment, such as price levels, rates and volatility of risk factors, political, macroeconomic and other uncertainties that significantly influence our

economic and financial performance. We define the limits for market risks when elaborating each new strategic plan we adopt, considering our strategic objectives, goals, expected value and the liquidity of financial resources required for the implementation of that strategic plan. The use of financial instruments, such as derivatives, may be necessary to meet our needs.

In general, our foreign currency floating rate debt is principally subject to fluctuations in LIBOR. Our floating rate debt denominated in *reais* is subject to fluctuations in the Brazilian interbank offering rate, or “DI” and Brazilian long-term interest rate, or “TJLP” as fixed by the CMN.

We are taking actions to mitigate the potential impact of the discontinuation of LIBOR by 2021 on our debt contracts in order to substitute LIBOR with another reference rate but according to informations that we have through the date of this annual report, we do not believe this event should represent a material risk to our consolidated results and financial condition.

We generally do not use derivative instruments to manage our exposure to interest rate fluctuation, but we may utilize these financial instruments in the future.

The exchange rate risk to which we are exposed has greater impact on the balance sheet and derives principally from the presence of non-*real* denominated obligations in our debt portfolio. With respect to the management of foreign exchange risks, we take a broader view of our consolidated activities, capturing possible natural hedges whenever they are available, benefiting from the correlation between our income and expenses. For the short term, the management of our foreign exchange risk involves allocating our cash investments between the *real* and other foreign currencies. Our strategy, reevaluated annually in the revision of our Strategic Plan, may also involve the use of financial instruments, such as derivatives, to hedge certain liabilities, minimizing foreign exchange rate risk exposure, especially when we are exposed to a foreign currency in which no cash inflows are expected, for example, Pound Sterling. In 2017, we entered into derivative transactions, through our indirect subsidiary Petrobras Global Trading BV (“PGT”), in the form of cross-currency swaps to hedge against exposure in sterling pounds versus U.S. dollars, arising from past issues of bonds in that currency. In 2018, we also entered into, through PGT, derivative operations in the form of non-deliverable forwards to hedge against exposure in sterling pounds versus U.S. dollars, arising from past issues of bonds in that currency. Both transactions are still outstanding.

In September 2019, we contracted derivative operations to hedge against cash flow exposure arising from debt issued in Brazilian *reais*, the first series of the 7th issue of debentures, with the IPCAxCDI interest rate swap maturing in September 2029 and September 2034 and the CDI x Dollar cross-currency swap operations maturing in September 2024 and September 2029.

We have designated cash flow hedging relationships to reflect the economic essence of the structural hedge mechanism between U.S. dollar-denominated debt and future sales revenues.

See “Consolidated Financial Performance – Exchange Rate Variation Impacts” in this section and Notes 4.8 and 38.3(a) to our audited consolidated financial statements for further information about our cash flow hedge.

See Note 38.3(c) to our audited consolidated financial statements for more information about our interest rate and exchange rate risks, including a sensitivity analysis demonstrating the potential impact of a 25% (or 50%) adverse change in the underlying variables as of December 31, 2020.

For further information regarding expected maturity schedule and currency, the principal and interest cash flows, related average interest rates of our debt obligations, credit risk and liquidity risk, see Notes 34, 38.5 and 38.6 to our audited consolidated financial statements.

### Lease Liabilities

We are the lessee in agreements primarily including oil and gas producing units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, lands and buildings. As of December 31, 2020, the amount of lease liabilities totaled US\$21,650 million.

### Adjusted EBITDA and Net Debt/Adjusted EBITDA ratio

The Net Debt/Adjusted EBITDA ratio is a metric that helps our management in assessing our liquidity and leverage, and it is measured in U.S. dollars.

Adjusted EBITDA represents an alternative measure to our net cash provided by operating activities and is computed by using the EBITDA (net income before net finance income (expense), income taxes, depreciation, depletion and amortization) adjusted by results in equity-accounted investments, impairment, cumulative foreign exchange adjustments reclassified to the income statement, results from disposal and write-offs of assets and foreign exchange gains and losses resulting from provisions for legal proceedings denominated in foreign currencies. Legal provisions in foreign currencies primarily consist of our portion of the class action settlement provision signed in December 2017. In addition, they are substantially similar to the foreign exchange effects presented within net finance income.

US\$ million	2020	2019	2018
Net income (loss) from continuing operations	948	7,803	6,571
Net finance income (expense)	9,630	8,764	6,484
Income taxes	(1,174)	4,200	4,256
Depreciation, depletion and amortization	11,445	14,836	11,912
<b>EBITDA</b>	<b>20,849</b>	<b>35,603</b>	<b>29,223</b>
Results in equity-accounted investments	659	(153)	(523)
Impairment	7,339	2,848	2,005
Reclassification of comprehensive income (loss) due to the disposal of equity-accounted investments	43	34	-
Results on disposal/write-offs of assets and on remeasurement of investment retained with loss of control	(499)	(6,046)	(416)
Foreign exchange gains or losses on provisions for legal proceedings	-	120	455
<b>Adjusted EBITDA from continuing operations</b>	<b>28,391</b>	<b>32,406</b>	<b>30,744</b>
<b>Adjusted EBITDA from discontinued operations</b>	<b>-</b>	<b>301</b>	<b>758</b>
<b>Adjusted EBITDA</b>	<b>28,391</b>	<b>32,707</b>	<b>31,502</b>

Net Debt reflects the Gross Debt, net of Adjusted Cash and Cash Equivalents (see definition in "Liquidity and Capital Resources" in this annual report). Gross Debt reflects the sum of current and non-current finance debt and lease liabilities.

Our EBITDA, Adjusted EBITDA, Adjusted Cash and Cash Equivalents, Gross Debt, Net Debt and Net Debt/Adjusted EBITDA ratio are non-GAAP measures and may not be comparable to the calculation of liquidity measures presented by other companies, and they should neither be considered in isolation nor as substitutes for any measures calculated in accordance with IFRS. These metrics must be considered together with other measures and indicators for a better understanding of our financial condition.

We applied the same foreign exchange translation method as set forth in Note 2 to our audited consolidated financial statements for presenting this metric in U.S. dollars. Accordingly, assets and liabilities items were translated into U.S. dollars at the exchange rate as of the date of the statement of financial position, and all items pertaining to the statement of income and statement of cash flows were translated at the average rates prevailing at each period.

The following table presents the reconciliation for 2020 and 2019 of the Net Debt/Adjusted EBITDA ratio measure to the most directly comparable GAAP measure in accordance with IFRS, which is, in this case, the Finance debt plus Lease liability less cash and cash equivalents / Net cash provided by operating activities ratio:

	2020 (US\$ million)	2019 (US\$ million)
Cash and Cash Equivalents	11,711	7,372
Government securities and time deposits (maturity of more than three months)	659	888
<b>Adjusted Cash and Cash Equivalents</b>	<b>12,370</b>	<b>8,260</b>
Finance debt	53,888	63,260
Lease liability	21,650	23,861
<b>Current and non-current debt—Gross Debt</b>	<b>75,538</b>	<b>87,121</b>
<b>Net Debt</b>	<b>63,168</b>	<b>78,861</b>
Net cash provided by operating activities from continuing operations	28,890	25,277
Net cash provided by operating activities from discontinued activities	-	323
<b>Net cash provided by operating activities—OCF</b>	<b>28,890</b>	<b>25,600</b>
Income taxes	(1,174)	4,200
Allowance for credit loss on trade and other receivables	(144)	(87)
Trade and other receivables, net	(1)	(2,233)
Inventories	(724)	281
Trade payables	(216)	989
Deferred income taxes, net	1,743	(2,798)
Taxes payable	(2,914)	2,105
Others	2,931	4,650
<b>Total Adjusted EBITDA</b>	<b>28,391</b>	<b>32,707</b>
Adjusted EBITDA from continuing operations	28,391	32,406
Adjusted EBITDA from discontinued operations	-	301
<b>Gross debt net of cash and cash equivalents/OCF ratio</b>	<b>2.21</b>	<b>3.12</b>
<b>Net debt/Adjusted EBITDA ratio</b>	<b>2.22</b>	<b>2.41</b>

Our Net Debt/Adjusted EBITDA ratio computed in U.S. dollar decreased from 2.41 at December 31, 2019 to 2.22 at December 31, 2020, reflecting the effects derived by a 20% reduction in the Net Debt.

## Use of Funds

### Capital Expenditures

We disbursed a total of US\$8,056 million in 2020 (which 81% was used in E&P business), a 71% decrease when compared to our Capital Expenditures of US\$27,413 million in 2019. In line with our previous 2019-2023 Business and Management Plan, our Capital Expenditures in 2020 were primarily directed toward the most profitable investment projects relating to oil and gas production. These expenditures are based on our plan cost assumptions and financial methodology.

#### CAPITAL EXPENDITURES BY BUSINESS SEGMENTS (US\$ MILLION)

For the Year Ended December 31,	2020	2019	2018
Exploration and Production	6,557	25,080	11,592
Refining, Transportation and Marketing	947	1,463	1,107
Gas and Power	352	543	433
Corporate and Other Businesses	200	328	307
<b>TOTAL</b>	<b>8,056</b>	<b>27,413</b>	<b>13,439</b>

For information on our future Capital Expenditures, see “Strategic” in this annual report.



## Dividends

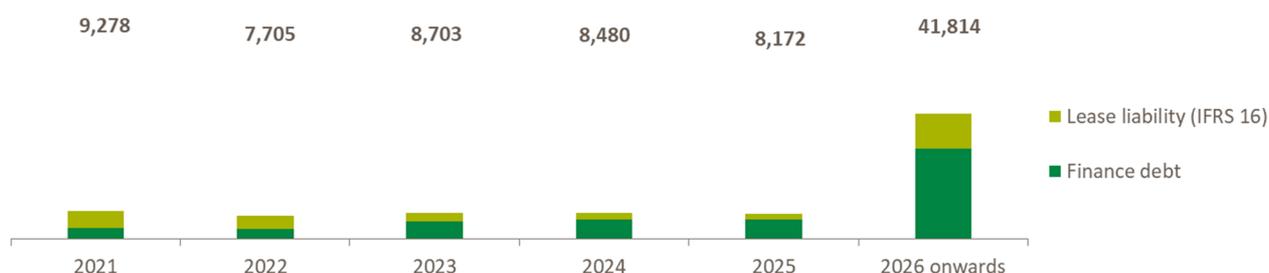
Our Board of Directors proposed a distribution of dividends in 2020 in the amount of US\$1,977 million, which includes US\$849 million related to the minimum mandatory dividend to preferred shareholders and US\$1,128 million as additional dividends proposed to ordinary shareholders.

For more information on our dividend policy, see “Shareholder Information – Dividends” in this annual report and Note 36.5 to our audited consolidated financial statements.

## Debt Service Obligations

As of December 31, 2020, our debt maturity profile includes, for the next five years, US\$42,338 million in finance debt and lease liability (nominal amounts).

### AMORTIZATION PROFILE (US\$ MILLION)



## Financial Debt

In 2020, we repaid several finance debts, in the amount of US\$28,884 million notably: (i) prepayment of banking loans in the domestic and international market totaling US\$4,147 million; (ii) US\$9,515 million to repurchase global bonds previously issued by us in the capital market, with net premium paid to bond holders amounting to US\$1,155 million; and (iii) partial prepayment of its revolving credit lines, in the amount of US\$7,600 million.

## Lease Liabilities

We are the lessee in agreements primarily including oil and gas producing units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, land and buildings.

Payments in certain lease agreements vary due to changes in facts or circumstances occurring after their inception other than the passage of time. These payments are not included in the measurement of the lease obligations.

For information on changes in the balance of lease liabilities and on leases by class of underlying assets, see note 35 to our audited consolidated financial statements.

# Other Information

## Contractual Obligations

The following table summarizes our outstanding contractual obligations and commitments as of December 31, 2020:

	Payments Due by Period (US\$ million)				
	Total	< 1 year	1-3 years	3-5 years	> 5 years
<b>Contractual obligations</b>					
<b>Statement of Financial Position <sup>(1)(5)</sup></b>					
Finance debt <sup>(2)</sup>	53,888	4,186	9,174	12,190	28,338
Lease liability	29,020	5,756	7,206	4,075	11,983
Provision for decommissioning costs <sup>(3)</sup>	<u>18,780</u>	<u>938</u>	<u>2,171</u>	<u>1,866</u>	<u>13,805</u>
<b>Total Statement of Financial Position</b>	<b>101,688</b>	<b>10,880</b>	<b>18,551</b>	<b>18,131</b>	<b>54,126</b>
<b>Other contractual commitments</b>					
Natural gas ship-or-pay <sup>(4)</sup>	22,647	2,655	4,659	4,666	10,666
Service contracts	82,910	1,829	19,436	21,676	39,969
Natural gas supply agreements <sup>(4)(6)</sup>	3,123	651	1,326	1,146	0
Leases not yet started	67,408	7,218	16,267	2,110	41,813
Short-term lease arrangements	96	96	0	0	0
Purchase commitments	<u>5,160</u>	<u>1,583</u>	<u>1,975</u>	<u>1,503</u>	<u>100</u>
<b>Total other commitments</b>	<b>181,344</b>	<b>14,032</b>	<b>43,663</b>	<b>31,101</b>	<b>92,548</b>
<b>TOTAL</b>	<b>283,032</b>	<b>24,912</b>	<b>62,214</b>	<b>49,232</b>	<b>146,674</b>

(1) It excludes the amount of US\$27,218 million related to our pension and medical benefits obligations, which are partially funded by US\$11,575 million in plan assets. Information on employees' post-retirement benefit plans, including a schedule of expected maturity of pension and medical benefits obligations, is presented in Note 18 to our audited consolidated financial statements.

(2) It includes accrued interest, short-term and long-term debt (current and non-current portions). Information about our future interest and principal payments (undiscounted) for the coming years is presented in Note 34.3 to our audited consolidated financial statements.

(3) It includes US\$640 million of liabilities related to assets classified as held for sale.

(4) Import contract was expected to terminate in December 2019, but it will be outstanding until all contracted volume has been delivered.

(5) Our Brazilian oil and gas agreements require us to invest at least 1% of our gross revenue originating from high productivity oil fields on research and development.

(6) On March 6, 2020, we entered into a new amendment to the long-term Gas Supply Agreement (GSA) with YPFB. The signed amendment refers to the portion of gas contracted in 1999, at the beginning of the Bolivia-Brazil gas pipeline operation, and which has not yet been withdrawn by us.

## Off-Balance Sheet Arrangements

As of December 31, 2020, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a material effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

## Critical Accounting Policies and Estimates

Information on critical accounting policies and estimates, which involves a higher degree of complexity in the application of the accounting policies that currently affect our financial condition and results of operations is provided in our audited consolidated financial statements. Note 4 to our audited consolidated financial statements addresses the estimates that we consider most significant based on the degree of uncertainty, the potential events that may negatively affect our estimates and the likelihood of a material impact if we used a different estimate. These assumptions are based on past transactions and other relevant information and are periodically reviewed by our management. Actual results could differ from these estimates.

The impacts of Covid-19 and its effects over the economic environment were considered in the preparation of our financial statements. The results of the review of assumptions are presented in Note 6 to our audited consolidated financial statements.

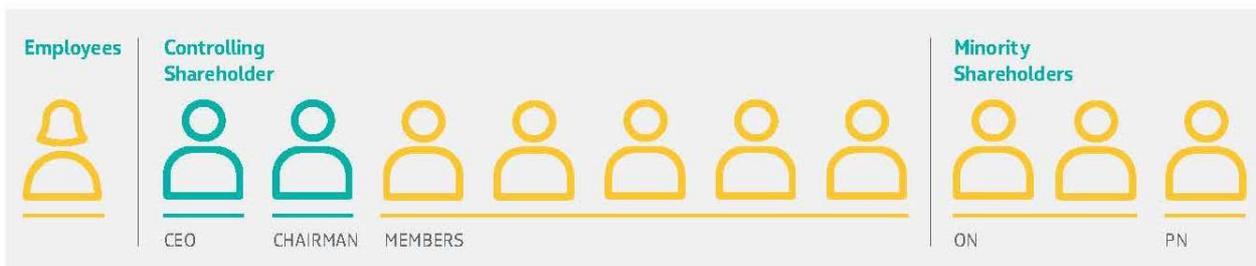
Additional information, including our significant accounting policies, are provided in each of our explanatory notes to our audited consolidated financial statements.



## Management and Employees

# Management

## Board of Directors



Our Board of Directors is composed of a minimum of seven and maximum of eleven members and is responsible for, among other things, establishing our general business policies. Our Bylaws specifically provide that our Board of Directors must be composed of external members only, without any current statutory or employment relationship with us, except for the member designated as our CEO and the member elected by our employees.

The Brazilian federal government controls a majority of our voting shares and has the right to elect a majority of the members of our Board of Directors. Our Board of Directors, in turn, elects our management. See “Recent Developments” in this annual report.

As a mixed-capital company with 200 or more employees, in which the Brazilian federal government directly or indirectly holds a majority of the voting rights, our employees have the right to elect one member of our Board of Directors to represent them, by means of a separate voting procedure.

Our Bylaws also provide that, regardless of the rights granted to minority shareholders, the Brazilian federal government always has the right to elect the majority of our directors, regardless of the number of directors.

The term of office of our directors may not exceed two years and any member of our Board of Directors may be re-elected for up to three consecutive times.

In accordance with Brazilian Corporate Law, shareholders may remove any director from office at any time with or without cause at an extraordinary shareholders’ meeting, and in case of removal of any board member elected through cumulative voting procedure, it will result in the removal of all of the other members elected under the same procedure, after which new elections must occur.

Our Board of Directors must be composed of, at least, 40% independent members, in compliance with Brazilian Corporate Law and B3 Level 2 rules. In case of contradictions between these rules, the stricter rules prevail.

For further information on Level 2 listing segment, see “Shareholder Information” in this annual report.

For further information regarding the composition, attributions and duties of our Board of Directors, see Exhibit 1.1 to this annual report for a copy of our Bylaws.

For further information relating to potential changes to the composition of our Board of Directors and our management team, see “Recent Developments” in this annual report.

As of the date of this annual report, we have the following 11 directors:

**Eduardo Bacellar Leal Ferreira**

 <p><b>Born</b> June 2, 1952</p>	 <p><b>Nationality</b> Brazilian</p>	 <p><b>Position</b> Chairman of the Board of Directors since January 2019</p>	 <p><b>Other directorships</b> None</p>
 <p><b>Current term expires</b> Ordinary General Shareholders’ meeting 2022</p>	 <p><b>Nominated by</b> Controlling Shareholder</p>	 <p><b>Independent</b> No</p>	 <p><b>Family Relations</b> None</p>
<p> <b>Business experiences</b> Mr. Leal Ferreira is a fleet admiral and was the commander of the Brazilian Navy until January 2019. Before he held this position, Mr. Leal Ferreira served in the Brazilian Navy for 48 years in different positions, having been the commander in chief of the Brazilian Navy fleet and the commander of Brazil’s national war college. He was director of the ports and coasts area of the Brazilian Navy which is responsible for the technical supervision of maritime safety of all operating vessels in Brazil, including platforms and support vessels.</p>			
<p> <b>Education</b> Mr. Leal Ferreira was trained at the Brazilian Naval School, the Brazilian Naval War College, and the Naval War College of Chile.</p>			

### Roberto da Cunha Castello Branco

 <b>Born</b> July 20, 1944	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since January 2019	 <b>Other directorships</b> None
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Controlling Shareholder	 <b>Independent</b> No	 <b>Family Relations</b> None
 <b>Business experiences</b> Mr. Castello Branco was a member of our Board of Directors between May 2015 and April 2016 and has been our Chief Executive Officer since January 2019. He was an affiliated professor at Fundação Getulio Vargas (FGV EPGE) and director at the center for studies in economic growth and development at EPGE. Previously, Mr. Castello Branco was a director at Vale S.A., Banco Central do Brasil, Banco Boavista, Banco Boavista Investimentos and Banco InterAtlântico. He also acted as a member of the Board of Directors of GRU Airport, Invepar, ABRASCA, IBEF and director at the American Chamber of Commerce (RJ).			
 <b>Education</b> Mr. Castello Branco holds a bachelor's degree in economics, with a PHD from Fundação Getulio Vargas (FGV EPGE) and a postdoctoral degree from University of Chicago. Mr. Castello Branco also participated in executive training programs at Sloan School of Management (MIT) and International Institute for Management Development (IMD).			

### João Cox Neto

 <b>Born</b> May 2, 1963	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since February 2019	 <b>Other directorships</b> Chairman of the Board of Directors of Vivara; Vice Chairman of the Board of Directors of Braskem and member of the Board of Directors of Embraer and Linx.
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Controlling Shareholder	 <b>Independent</b> Yes	 <b>Family Relations</b> None
 <b>Business experiences</b> Mr. Cox has served as CEO and president of Telemig Celular, Amazonia Celular and Claro, and in other distinguished C-level positions. Mr. Cox has been a member of many boards in Brazil for the last three decades and, currently he is a member of the Board of Directors of Embraer, Linx, Braskem (where he currently is the vice-chairman), and Vivara (where he currently is the chairman).			
 <b>Education</b> Mr. Cox has a bachelor degree in economics and attended graduate studies in Economics at the Université du Quebec à Montreal and at the Oxford University's College of Petroleum Studies program.			

### Leonardo Pietro Antonelli

 **Born**  
October 16, 1970

 **Nationality**  
Brazilian

 **Position**  
Member of the Board of Directors since August 2020

 **Other directorships**  
None

 **Current term expires**  
Ordinary General Shareholders' meeting 2022

 **Nominated by**  
Minority Shareholders

 **Independent**  
Yes

 **Family Relations**  
None

 **Business experiences**  
A founding partner of Antonelli e Advogados Associados. Mr. Antonelli has been a member of many selection committees for careers in the civil service, such judge, detective and inspector of both the Federal and Civil Police Forces. Appointed as Judicial Administrator of the Rio de Janeiro Court of Justice, also acting as a Councillor for the Ordem dos Advogados do Brasil (OAB-RJ), as the head of the Jurisdiction Defence Committee. Awarded with the Innovare Prize for Justice Speaks to Those Who Will Hear It ("Justiça fala para quem quer ouvir"). Author of a number of publications, i.e. "Curso de Direito Tributário Brasileiro" (A Course on Brazilian Tax Law) – Volume III, published in three editions by Quartier Latin Press, and its fourth edition by Almedina Press, and "Correção Legislativa da Jurisprudência: Uma análise das emendas constitucionais em matéria tributária", published by Justiça e Cidadania Press. He took on the position of Head Teacher of the "Escola da Magistratura Eleitoral" (School of Electoral Law) during the biennials in which integrated the Tribunal Regional Eleitoral do Estado do Rio de Janeiro (Rio de Janeiro State Electoral Regional Court), exercising the position of federal judge, as a jurist appointed by the President of the Republic.

 **Education**  
Mr. Antonelli is lawyer and graduated from Universidade Candido Mendes (UCAM-RJ), a postgraduate diploma in Taxation Law from Universidade Estácio de Sá (UNESA-RJ) and a master's degree in Economic Law from Universidade Candido Mendes (UCAM-RJ).

### Marcelo Mesquita de Siqueira Filho

 **Born**  
December 20, 1969

 **Nationality**  
Brazilian

 **Position**  
Member of the Board of Directors since August 2016

 **Other directorships**  
Board Member at the Endowment Fund of PUC-RJ (Pontifícia Universidade Católica do Rio de Janeiro) and Member of the Board of Directors of Tamboro Educacional S.A.

 **Current term expires**  
Ordinary General Shareholders' meeting 2022

 **Nominated by**  
Common Shareholders

 **Independent**  
Yes

 **Family Relations**  
None

 **Business experiences**  
Mr. Mesquita is a co-founding partner of Leblon Equities (since 2008) and co-manager of equity funds and of private equity investments. He has approximately 30 years of experience in the Brazilian stock market, having worked at UBS Pactual for 10 years and at Banco Garantia for seven years. At UBS Pactual, he was the co-head of Brazilian Equity Capital Markets; co-head of Brazilian Equities; and head of Brazil Equity Research & Strategy Analysis. At Banco Garantia he was a commodities stock analyst and investment banker. Since 1995, he was appointed by investors as one of the leading analysts in Brazil according to several surveys made by Institutional Investor magazine. He was ranked "#1 Brazil Analyst" from 2003 to 2006 (#3 in 2002, #2 in 2001 and #3 in 2000). He was also ranked as "#1 Stock Strategist in Brazil" from 2003 to 2005.

 **Education**  
Mr. Mesquita holds a degree in economics from the Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), in French studies from Nancy University II and an OPM (Owner/President Management) from Harvard Business School.

**Nivio Ziviani**

 <b>Born</b> August 27, 1946	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since March 2019	 <b>Other directorships</b> Member of the Board of Directors of Kunumi and Member of Technology Council of Digital Transformation of the Brazilian Petroleum, Gas and Biofuels Institute.
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Controlling Shareholder	 <b>Independent</b> Yes	 <b>Family Relations</b> None

 **Business experiences**  
Mr. Ziviani is Professor Emeritus of the Department of Computer Science (DCS) of the Federal University of Minas Gerais (UFMG), member of the Board of Directors of Kunumi and Petrobras, and member of the Technology Council of Digital Transformation of the Brazilian Petroleum, Gas and Biofuels Institute. He is a member of the Brazilian Academy of Sciences and the National Order of Scientific Merit in the classes Comendador and Gran Cruz. He founded companies from knowledge generated within the DCS/UFMG, namely: Kunumi, Neemu, Akwan and Miner. He is the author of the book Design of Algorithms and co-author of over 200 scientific articles in the areas of algorithms, information retrieval, machine learning and artificial neural networks.

 **Education**  
Mr. Ziviani holds a bachelor's degree in mechanical engineering from UFMG, a master's degree in informatics from PUC-Rio and a PhD in computer science from the University of Waterloo, Canada.

**Omar Carneiro da Cunha Sobrinho**

 <b>Born</b> July 7, 1946	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since July 2020	 <b>Other directorships</b> Member of the Board of Directors of Grupo Energisa S/A, Brookfield Properties Partners LP and Libraport Campinas S/A.
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Controlling Shareholder	 <b>Independent</b> Yes	 <b>Family Relations</b> None

 **Business experiences**  
Mr. Sobrinho has extensive executive experience and relationships in Brazil and abroad in business, government, and sector entities. Mr. Sobrinho was CEO of Shell Brasil, Shell Quimica, Billiton Metais, AT&T Brasil, and Varig. He was a member of the Board of Directors and Executive Management of companies and entities such as Sindicom, Cultura Inglesa S/A, Amcham Brasil-RJ, Commercial Association of Rio de Janeiro, Valesul Alumínio S/A, Mineração Rio do Norte S/A, Brasoil Ltda, Huisman Ltda, Libra Group, Business Cooperation Committee – FGV, among others.

 **Education**  
Mr. Sobrinho has a degree in Economics from the School of Political and Economic Sciences of Rio de Janeiro and a post-graduate degree in Financial Administration from FGV.

**Paulo Cesar de Souza e Silva**

 <b>Born</b> October 8, 1955	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since July 2020	 <b>Other directorships</b> Member of the Board of Directors of the Águia Branca Group and Centrais Elétricas de Minas Gerais
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Controlling Shareholder	 <b>Independent</b> Yes	 <b>Family Relations</b> None
 <b>Business experiences</b> Mr. Paulo Cesar de Souza e Silva has more than 40 years of professional experience in the domestic and international financial sectors, as well as in the aviation sector. He has extensive international experience, both personal and professional, with intensive practice in the five continents. Mr. Paulo Cesar de Souza e Silva was the Chief Executive Officer of Embraer S.A. for the last years, where he has worked for more than 20 years. He has been awarded with the Ordem Nacional Barão de Mauá by the President of Brazil (December 2018), elected by the Forbes Magazine as one of Brazil's Best CEOs (July 2018), elected Entrepreneur of the Year in the Industry by Revista Isto É (December 2019), Personality of Innovation Technology by the Sindicato dos Engenheiros (December 2016) and has been honoured with the Ordem do Mérito Aeronáutico by the Minister of Defense (October 2016).			
 <b>Education</b> Mr. Paulo Cesar de Souza e Silva graduated as an economist from Universidade Mackenzie (1979) and has an MBA degree from the University of Lausanne, Switzerland (1982).			

**Rodrigo de Mesquita Pereira**

 <b>Born</b> October 20, 1964	 <b>Nationality</b> Brazilian	 <b>Position</b> Member of the Board of Directors since July 2020	 <b>Other directorships</b> None
 <b>Current term expires</b> Ordinary General Shareholders' meeting 2022	 <b>Nominated by</b> Preferred Shareholders	 <b>Independent</b> Yes	 <b>Family Relations</b> None
 <b>Business experiences</b> Member of the Public Prosecution Service of the State of São Paulo (1991-2001). Partner at Alves Ferreira & Mesquita Sociedade de Advogados. Member of the Fiscal Council of Companhia Energética de Minas Gerais - CEMIG - from 2016 to 2020; Alternate Member of the Fiscal Council of Petrobras from 2018 to 2019.			
 <b>Education</b> Mr. Mesquita is lawyer with a Bachelor's Degree in Law from the Law School of the University of São Paulo (Universidade de São Paulo) (1988); University Extension in "Diffuse and Collective Interests" from Pontifícia Universidade Católica de São Paulo. He also holds a Post Graduate Degree in Business Management from Getúlio Vargas Foundation (Fundação Getúlio Vargas).			

### Rosangela Buzanelli Torres

 **Born**  
January 5, 1960

 **Nationality**  
Brazilian

 **Position**  
Member of the Board of Directors since July 2020

 **Other directorships**  
None

 **Current term expires**  
Ordinary General Shareholders' meeting 2022

 **Nominated by**  
Employees

 **Independent**  
Yes

 **Family Relations**  
None

 **Business experiences**  
Mrs. Buzanelli joined Petrobras in 1987 in the Geophysics department. She is currently employed in Deepwater Exploration.

 **Education**  
Mrs. Buzanelli holds a degree in Geosciences and Engineering from the Federal University of Ouro Preto, and a master's degree in Geosciences from the National Institute of Space Research.

### Ruy Flaks Schneider

 **Born**  
February 28, 1941

 **Nationality**  
Brazilian

 **Position**  
Member of the Board of Directors since June 2020

 **Other directorships**  
Chairman of the Board of Directors of the Liga da Reserva Naval do Brasil and Member of the Board of Directors of Centrais Elétricas Brasileiras S.A. - ELETROBRAS and of Comitê para o Desenvolvimento do Mercado de Capitais - CODEMEC

 **Current term expires**  
Ordinary General Shareholders' meeting 2022

 **Nominated by**  
Controlling Shareholder

 **Independent**  
Yes

 **Family Relations**  
None

 **Business experiences**  
Mr. Schneider attended the Escola Superior de Guerra. He founded the Industrial Engineering Department at PUC-RIO, becoming its first director and establishing the first master's program in Industrial Engineering in Brazil. With several published articles, he works as a speaker, in Brazil and abroad. He has accumulated vast experience, both as an executive and as a member of the Board of Directors and Fiscal Council of large companies, including Xerox do Brasil S.A., Banco Brascan de Investimento S.A., Banco de Montreal S.A. (Montreal Bank), Grupo Multiplan and INB Indústrias Nucleares do Brasil. Mr. Schneider served as a member of the Central Bank's capital market advisory Board, participating in advising on the preparation of the external debt conversion program. Mr. Schneider was the creator of the first multi-sponsored pension fund and introduced Defined Contribution funds in Brazil.

 **Education**  
Mr. Schneider is an industrial mechanical and production engineer. He holds a degree from PUC-RIO as well as a Master of Sciences in Engineering Economy from Stanford University.

## Fiscal Council

We have a permanent Fiscal Council composed of up to five members, which is independent of our management and independent auditors. Our Fiscal Council's responsibilities, as a supervisory body, include, among others: (i) representing the shareholders, monitoring management activities; (ii) verifying compliance with legal and statutory duties; and (iii) reviewing the annual management report and the audited consolidated financial statements, issuing an opinion at the end of the year.

The members of our Fiscal Council and their corresponding alternates are elected by our shareholders at the annual shareholders' meeting for a one-year term. Two consecutive re-elections are permitted under Brazilian Corporate Law. Holders of preferred shares and minority holders of common shares are each entitled, as a class, to elect one member and the corresponding alternate of our Fiscal Council. The Brazilian federal government has the right to appoint the majority of the members of our Fiscal Council and their alternates, of which one member and the corresponding alternate will be necessarily appointed by the Minister of Economy, representing the Brazilian Treasury.

### CURRENT MEMBERS OF OUR FISCAL COUNCIL

Members of our Fiscal Council	Year of first appointment	Elected/appointed by
José Franco Medeiros de Morais (Chairman)	2019	Brazilian federal government/Ministry of Economy
Sergio Henrique Lopes de Sousa	2020	Brazilian federal government
Agnes Maria de Aragão da Costa	2020	Brazilian federal government
Marcelo Gasparino da Silva	2019	Minority shareholder
Daniel Alves Ferreira	2018	Preferred shareholder
<b>Alternate members of our Fiscal Council</b>		
Gildenora Batista Dantas Milhomem	2019	Brazilian federal government/Ministry of Economy
Alan Sampaio Santos	2020	Brazilian federal government
Jairez Elói de Sousa Paulista	2019	Brazilian federal government
Paulo Roberto Evangelista de Lima	2020	Minority shareholder
Fabício Santos Debortoli	2020	Preferred shareholder

## Executive Officers



Our Board of Executive Officers is composed of one Chief Executive Officer (“CEO”) and eight executive officers. According to our Bylaws, our Board of Executive Officers is responsible for our day-to-day management. Our executive officers are not required to be Brazilian citizens but must reside in Brazil. Pursuant to our Bylaws, our Board of Directors elects our executive officers, including the CEO, and must consider personal qualifications, expertise and specialization when electing executive officers. The mandate of our executive officers lasts for two years, and no more than three consecutive re-elections are allowed. Our Board of Directors may remove any executive officer from office at any time and without cause, with a special procedure for the removal of the Executive Director of Governance and Compliance pursuant to the Internal Regime of Board of Directors. According to the Internal Regime of Board of Directors, in order to decide on the removal of the Executive Director of Governance and Compliance the Board of Directors must follow a qualified quorum which requires the vote of the Director elected by the minority shareholders or the Director elected by the preferred shareholders.

For further information regarding our Board of Executive Officers, see Exhibit 1.1 to this annual report for a copy of our Bylaws.

As of the date of this annual report, we have the following 9 executive officers:

### Roberto da Cunha Castello Branco



**Born**  
July 20, 1944



**Nationality**  
Brazilian



**Position**  
Chief Executive Officer (CEO)  
since January 2019



**Family Relations**  
None



**Current term expires**  
March 2021



#### Business experiences

Mr. Castello Branco was a member of our Board of Directors between May 2015 and April 2016 and has been our Chief Executive Officer since January 2019. He was an affiliated professor at Fundação Getulio Vargas (FGV EPGE) and director at the center for studies in economic growth and development at EPGE. Previously, Mr. Castello Branco was a director at Vale S.A., Banco Central do Brasil, Banco Boavista, Banco Boavista Investimentos and Banco InterAtlântico. He also acted as a member of the Board of Directors of GRU Airport, Invepar, ABRASCA, IBEF and director at the American Chamber of Commerce (RJ).



#### Education

Mr. Castello Branco holds a bachelor's degree in economics, with a PHD from Fundação Getulio Vargas (FGV EPGE) and a postdoctoral degree from University of Chicago. Mr. Castello Branco also participated in executive training programs at Sloan School of Management (MIT) and International Institute for Management Development (IMD).

### André Barreto Chiarini



**Born**  
May 10, 1973



**Nationality**  
Brazilian /  
Italian



**Position**  
Chief Trading & Logistics Officer  
since May 2020



**Family Relations**  
None



**Current term expires**  
March 2021



#### Business experience

Mr. Chiarini was a founding partner and Managing Director of Infra Partners Investimentos em Logística, has more than 20 years of experience in logistics working as the head of operations, planning, business development and corporate functions in several countries. In addition to founding three other companies, he was the Planning and Logistics Development Director at Vale, International Shared Services Director (based in Switzerland) at Vale International, Electronics and Consumer Goods Director at TNT Logistics and Senior Associate at the Operations Competency Center at Booz & Co.



#### Education

Mr. Chiarini holds a B.Sc. degree in Chemical Engineering from UFRJ and a Master of Science degree in Business Administration from COPPEAD/UFRJ. He took part in an exchange program at the Master of International Management (MIM) of AGSIM/Thunderbird, and participated in management courses at the MIT Sloan School of Management, IMD, Chicago Booth and University of Michigan Business School.

### Andrea Marques de Almeida



**Born**  
January 13, 1971



**Nationality**  
Brazilian /  
Portuguese



**Position**  
Chief Financial Officer (CFO) /  
Chief Investor Relations Officer  
(CIRO) since May 2019



**Family Relations**  
None



**Current term expires**  
March 2021



**Business experience**  
Mrs. Almeida worked at Vale S.A. for 25 years with extensive experience in Corporate Finance, Global Treasury and Risk Management. She was CFO of Vale Canada in Toronto from 2015 to 2018, most recently holding the position of Global Treasury Executive Manager at Vale.



**Education**  
Mrs. Almeida is a production engineer, with an MBA in Finance from IBMEC-RJ and an MBA in management from USP, as well as management courses at the Wharton School of Finance and Sloan School of Management (MIT).

### Anelise Quintão Lara



**Born**  
May 24, 1961



**Nationality**  
Brazilian



**Position**  
Chief Refining and Natural Gas  
Officer since March 2019



**Family Relations**  
None



**Current term expires**  
March 2021. Mrs. Lara retired from her position on January 26, 2021, and her vacancy was filled by Mr. Rodrigo Costa Lima e Silva, as indicated below.



**Business experience**  
Mrs. Lara has been our Chief Refining and Natural Gas Officer since March 2019. She joined Petrobras in 1986 and has held various positions since, including executive manager for acquisitions & divestments between April 2016 and March 2019. Prior to that, Mrs. Lara was the joint project team director for the Libra Consortium, ruled by the first production sharing agreement in Brazil. She has managed several activities related to exploration and production, including in reservoir technology, reservoir engineering, subsurface studies, and production development projects for deepwater fields. Additionally, Mrs. Lara served as a member of SPE International Board from 2014 to 2017 and as Chair of the Brazilian Petroleum Institute Board (IBP) since 2019.



**Education**  
Mrs. Lara earned a bachelor's of science degree in chemical engineering and a master of science degree in petroleum engineering from Universidade Federal de Ouro Preto in Minas Gerais, Brazil, as well as a PhD in Earth Sciences from Université Pierre et Marie Curie (Paris 6), France. She also completed the "Top Management Executive MBA" program at the Universidade Federal do Rio de Janeiro/COPPEAD Graduate School of Business.

**Carlos Alberto Pereira de Oliveira**

 <b>Born</b> September 11, 1957	 <b>Nationality</b> Brazilian	 <b>Position</b> Chief Exploration and Production Officer since March 2019	 <b>Family Relations</b> None
 <b>Current term expires</b> March 2021			
 <b>Business experience</b> Mr. Oliveira joined Petrobras in 1981, having become a petroleum engineering specialist. Since 1999, he has held various executive positions linked to the senior management of the companies of our group, including executive manager of E&P Corporative from 1999 to 2003, Director of Exploration and Production of Oil and Gas in Petrobras Energia S.A. from 2003 to 2008, Executive Manager of Technical Support for International Affairs from 2008 to 2012, Executive Manager of E&P Investment Management Programs in Drilling Rigs and Stationary Production Units from 2012 to 2013, Executive Manager of Production Development Projects in 2013, Executive Manager of Strategy in 2016 and General Manager of E&P Integrated Asset Management from 2016 to January 2019. Additionally, he has been a member of the Brazilian Petroleum Institute Board (IBP) since 2019.			
 <b>Education</b> Mr. Oliveira graduated in mechanical engineering from Instituto Militar de Engenharia do Rio de Janeiro (IME) and in business management from Universidade Federal do Rio de Janeiro (UFRJ). He holds a master's degree in finance and investments from Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio) and completed a course in Petroleum Finance and Accounting at the University of Texas, in the United States.			

**Marcelo Barbosa de Castro Zenkner**

 <b>Born</b> August 9, 1971	 <b>Nationality</b> Brazilian	 <b>Position</b> Chief Governance and Compliance Executive Officer since September 2019	 <b>Family Relations</b> None
 <b>Current term expires</b> March 2021			
 <b>Business experience</b> Mr. Zenkner worked as public prosecutor, member of the prosecution service of the State of Espírito Santo from 1997 to January 2019, where he held multiple roles in the fight against corruption and organized crime. From January 2015 to March 2016, he held the position of Secretary of State for Control and Transparency of the State of Espírito Santo, which was the first state in Brazil to create an administrative structure and to apply administrative sanctions based on corporate anticorruption law. From February 2019 to August 2019, he held the position of CEO Consultant and member of the Petrobras Disciplinary Actions Committee, an internal body of our integrity system directly linked to our Board of Directors.			
 <b>Education</b> Mr. Zenkner holds a bachelor degree in law from the Federal University of Juiz de Fora (UFJF), and specialized in civil procedural law at the Catholic University of Petrópolis (UCP). He also holds a master's degree in fundamental constitutional rights and guarantees from the School of Law of Vitória (FDV) and a PhD in public law, from the Universidade Nova de Lisboa (FDUNL).			

### Nicolas Simone


**Born**

January 31, 1977


**Nationality**

Uruguayan


**Position**

Chief Digital Transformation and Innovation Executive Officer since October 2019


**Family Relations**

None


**Current term expires**

March 2021


**Business experience**

Mr. Simone has held leadership positions in large companies such as Itaú-Unibanco, Lojas Renner, ABInBev and Grupo Boticário, with a strong business expertise in industry, consumer goods, retail and financial market segments. Throughout his career, he published several articles, gave lectures and interviews about the journey for of Digital Transformation, Innovation, Creation of Ecosystems and how to transform traditional IT into a value-adding IT. His work was recognized through several awards: CIO Executive Award in Consumers Goods Category; CIO Executive Award in Retail and in 2017 published a Paper that was a Global Case about how to transform the CIO and IT roles into Value Added entities strengthening the business collaboration.


**Education**

Mr. Simone holds a degree in software and systems engineering from O.R.T University – Uruguay with extensive international experience and knowledge of information technology, digital transformation, cyber security, AI, omnichannel, CRM, innovation, sales, logistics, process reengineering, large projects, shared services center (SSC) and industry 4.0.

### Roberto Furian Ardenghy


**Born**

November 26, 1961


**Nationality**

Brazilian


**Position**

Chief Institutional Relations and Sustainability Executive Officer since May 2019


**Family Relations**

None


**Current term expires**

March 2021


**Business experience**

Mr. Ardenghy has a diplomatic career with a long experience in energy and oil and gas business. He has held a number of top positions at the Brazilian federal government in Brasília and in Brazilian embassies and consulates outside of Brazil, including Washington, Buenos Aires, Houston and New York. From 2002 to 2007, he worked as chief of staff, president of the ethics committee and head of downstream department at the ANP. From 2007 to 2011, he served as Corporate Relations Manager at BG E&P Brasil. He was a member of the Upstream Committee of the Brazilian Petroleum Institute and Director of the American Chamber of Commerce of Rio de Janeiro – AmCham Rio. He was also Honorary President of the Brazil-Texas Chamber of Commerce (BRATECC).


**Education**

Mr. Ardenghy holds a degree in law from the Federal University of Santa Maria and a master's degree in international relations and diplomacy, from the Diplomatic Academy of Rio Branco Institute. He also obtained an executive MBA in economics of oil and gas from COPPE at the Federal University of Rio de Janeiro.

### Rodrigo Costa Lima e Silva



**Born**  
April 17, 1975



**Nationality**  
Brazilian



**Position**  
Chief Refining and Natural Gas  
Officer since January 2021\*



**Family Relations**  
None



**Current term expires**  
March 2021.



**Business experience**  
Mr. Silva has been our Chief Refining and Natural Gas Officer since January 2021. He joined Petrobras in 2005 having held various positions since, including Executive Gas and Energy Manager between June 2019 and January 2021. Prior to that, Mr. Silva was the executive manager for Strategy. He has also managed activities related to exploration and production. Additionally, Mr. Silva was chairman of the Board of Directors of some Petrobras subsidiaries.



**Education**  
Mr. Silva holds a degree in Business Administration from Universidade Católica de Salvador. He has also a master's degree in Business Administration from IBMEC, as well as a MBA in Corporate Finance from Fundação Getúlio Vargas.

\* Mr. Rodrigo Costa Lima e Silva took office on January 27, 2021, replacing Mrs. Anelise Quintão Lara when she retired on January 26, 2021.

### Rudimar Andreis Lorenzatto



**Born**  
January 6, 1965



**Nationality**  
Brazilian



**Position**  
Chief Production Development  
Officer since March 2019



**Family Relations**  
None



**Current term expires**  
March 2021



**Business experience**  
Mr. Lorenzatto joined Petrobras in 1987 and since 1995 has held management positions in several areas as Offshore Wells, Production Operations and Subsea Systems. Between 2013 and 2019, he was Executive Manager of Offshore Wells Construction and Subsea Systems.



**Education**  
Mr. Lorenzatto graduated in civil engineering from the Federal University of Santa Maria (RS) in 1987. He completed a specialization in petroleum engineering from Petrobras Corporate University in 1989. He also holds MBAs from Fundação Getúlio Vargas (FGV) and Columbia University (USA), as well as an Advanced Management Program from INSEAD (France). Between 2012 and 2013, he also worked as a lecturer of production development at the post-graduate program of the Federal University of Rio de Janeiro (UFRJ).

## Additional Information on our Board of Directors and Board of Executive Officers

### Requirements for Election

Our Bylaws determine certain limitations on the election of our executive officers, members of our management and members of our Board of Directors in addition to criteria set forth by our nomination policy, Law No. 13,303/16, and Decree No. 8,945/16. Thus, in order to be elected, each of our executive officers and each member of our Board of Directors must:

- not be a defendant in any legal or administrative proceedings concerning a matter related to the activities to be performed in our company, with an unfavorable ruling by appellate courts;
- not have commercial or financial pending issues claimed or included in official debtor registers, although clarification on such issues may be provided to us;
- demonstrate diligence in solving issues raised in reports of internal or external control bodies in processes and/or activities under their management, when applicable;
- not have violated our Code of Ethics, Code of Conduct, Manual of our Program for Corruption Prevention or other internal rules, when applicable;
- not have been included in the disciplinary system of any of our subsidiaries or affiliates, nor have been subject to labor or administrative penalty in any other legal entity in the last three years as a result of internal investigations, when applicable; and
- have 10 years of experience in leadership, preferably, in business or in a related area, as specified in our nomination policy.

### Compensation

Under our Bylaws, our shareholders establish the aggregate compensation, or allocate the compensation on an individual basis, payable to our directors, executive officers, members of our Fiscal Council and advisory committees to our Board of Directors. In case shareholders do not allocate the compensation on an individual basis, our Board of Directors is allowed to do so.

For the year-ended December 31, 2020, the aggregate amount of compensation we paid to all members of our Board of Directors and our Board of Executive Officers was US\$2.8 million. As of December 31, 2020 we had 9 executive officers and 11 Board of Directors members.

For more information on the amounts set aside or accrued by us to provide pension, retirement or similar benefits, see “– Employees – Benefits” in this section.

	As of December 31, 2020		
	Board of Executive Officers	Board of Directors	Fiscal Council
Average number of members in the period	9.00	10.00	5.00
Average number of paid members in the period	9.00	4.42	5.00
Value of maximum compensation (US\$)	573,975.58	34,122.07	34,129.90
Value of minimum compensation (US\$)	425,001.35	34,122.07	34,129.90
Average value of compensation (US\$)	534,455.53	34,543.84	33,802.29

For further information regarding compensation of our employees and officers, see Notes 19 and 39.3 to our audited consolidated financial statements.

In addition, the members of our Board of Executive Officers receive additional benefits, such as medical assistance, supplementary social security benefits and a housing allowance.

The members of the Board of Directors are entitled to supplementary social security benefits. Members of the Board of Directors and the Board of Executive Officers may be legally entitled to gardening leave (“*Quarentena*”) upon termination of office, which rules and exceptions are provided by Brazilian law. None of the Directors are engaged with Petrobras or any of its subsidiaries providing for benefits upon termination of employment. We have a People Committee in the form of an advisory committee.

For information on our advisory committee, see “Statutory Board Committees” below.

## Share Ownership

As of December 31, 2020, the members of our Board of Directors, executive officers and members of Fiscal Council beneficially held the following shares of our capital stock:

	Board of Directors	Board of Executive Officers	Fiscal Council
Common shares	23,208	9,100	1,800
Preferred shares	383,361	32,083	1,700

Accordingly, on an individual basis, and as a group, our Directors, Executive Officers and Fiscal Council members beneficially owned less than one percent of any class of our shares. The shares held by our Directors, Executive Officers and Fiscal Council members have the same voting rights as the shares of the same type and class that are held by our other shareholders. None of our Directors, Executive Officers and Fiscal Council members holds any options to purchase common shares or preferred shares, nor does any other person have any option to purchase our common or preferred shares. We do not have a stock option plan for our Directors, Officers or employees.

## Statutory Board Committees

Our Board of Directors has a total of six statutory advisory committees:

- **Investment Committee:** responsible for advising our Board of Directors on our business plan and other strategic issues, including financial policies, and its execution. This committee is also responsible for advising our Board of Directors with respect to risks and strategies concerning business, investment, and divestment opportunities.
- **Audit Committee:** for further information on our audit committee, please see “Audit Committee” in this section.
- **Health, Safety and Environmental Committee:** responsible for advising our Board of Directors on policies and guidelines related to the strategic management of HSE, climate change, transition to a low carbon economy and social responsibility issues, among other matters. This committee monitors, among other issues, indicators and research on our image and reputation suggesting actions when necessary.
- **People Committee:** responsible for assisting the Board of Directors in all aspects regarding the management of senior level human assets, including, but not limited to: compensation (fixed and variable), career advancement, appointments, and succession policies as well as the selection and eligibility processes. The Committee oversees the implementation of the required background checks on integrity and conformity and advises the Board of Directors on legal compliance as well as compliance with company policies regarding Board of Directors, Fiscal Council and Executive Officers nominees, as well as external members of the Board of Directors advisory committees. The People Committee stands in compliance with Law No. 13,303/12 and Decree No. 8,945/16, assisting shareholders to nominate members to the Board of Directors and Fiscal Council. The People Committee acts as our body of last resource regarding any disciplinary procedures.
- **Minority Committee:** responsible for advising our Board of Directors on transactions with related parties involving us, the Brazilian federal government, its entities and foundations, or federal state-owned enterprises on a permanent basis, including following up the revision process of the Transfer of Rights Agreement. The minority committee also advises our shareholders issuing its opinion on certain matters that require approval in shareholders’ meetings, pursuant to article 30, §4 of our Bylaws.
- **Conglomerate Audit Committee:** approved to meet the requirements of Law No. 13,303/16, which provides the possibility that controlled companies share the costs and structures of their corresponding parent companies. It is responsible for the companies of the Petrobras Conglomerate that do not have a local audit committee.

## SUMMARY OF THE COMPOSITION OF OUR STATUTORY ADVISORY COMMITTEES

Members	Committees					
	Investment	Audit	Health, Safety, and Environment	People	Minority	Audit of the Petrobras Conglomerate
Durval José Soledade Santos						●
Edson Chil Nobre	●					
Evely Forjaz Loureiro			●			
Francisco Vidal Luna						●
João Cox Neto	●					
Leonardo Pietro Antonelli <sup>(1)</sup>				●	●	
Marcelo Mesquita de Siqueira Filho <sup>(2)</sup>					●	●
Nivio Ziviani	●					
Omar Carneiro da Cunha Sobrinho	●	●				
Paulo Cesar de Souza e Silva		●	●			
Rodrigo de Mesquita Pereira		●	●		●	
Rosangela Buzanelli Torres			●			
Ruy Flaks Schneider				●		●
Sergio Luiz de Toledo Piza				●		
Tales José Bertozzo Bronzato				●		

(1) Mr. Antonelli joined the People Committee on December 1, 2020.

(2) Mr. Mesquita was a member of the People Committee until November 30, 2020.

● CHAIRMAN / CHAIRWOMAN OF EACH COMMITTEE

● EXTERNAL MEMBERS OF EACH COMMITTEE

● REMAINING MEMBERS

## Audit Committee

Our statutory audit committee is an advisory committee of our Board of Directors, and provides assistance in matters involving our accounting, internal controls, financial reporting and compliance. Our statutory audit committee also recommends the appointment of our independent auditors to our Board of Directors and evaluates the effectiveness of our internal financial and legal compliance controls. In accordance with Law No. 13,303/2016 and Decree No. 8,945/2016, our statutory audit committee must have at least three members, and not more than five members, who must be independent in accordance with the independence requirements of the Law No. 13,303/2016 and CVM Instruction No. 509/2011 and at least one of whom must have recognized experience in corporate accounting. Additionally, CVM Instruction No. 509/2011 requires at least one member of the audit committee to be a board member, although they permit the appointment of other members who are not members of the Board of Directors provided that such other members meet the independence requirements of the CVM. On November 30, 2020, our shareholders approved an amendment to our bylaws requiring our audit committee to be composed of members of our Board of Directors and external individuals. On March 24, 2021, our Board of Directors nominated Mr. Valdir Augusto de Assunção as an external member of our audit committee.

Due to its composition, our statutory audit committee is not equivalent to or comparable with a U.S. audit committee. Pursuant to Exchange Act Rule 10A-3(c)(3), which provides for an exemption under the rules of the SEC regarding the audit committees of listed companies, a foreign private issuer is not required to have an audit committee equivalent to or comparable with a U.S. audit committee if the foreign private issuer has a body established and selected pursuant to home country legal or listing provisions expressly requiring or permitting such a body, and if the body meets the requirements that (i) it be separate from the full board, (ii) its members not be elected by management, (iii) no executive officer be a member of the body, and (iv) home country legal or listing provisions set forth standards for the independence of the members of the body.

Given that in 2011, the CVM approved an Instruction (No. 509/2011) governing the comitê de auditoria estatutário (statutory audit committee), an audit committee established under the bylaws of the issuer and subject to certain requirements under the CVM rules, we understand that our statutory audit committee complies with these requirements, and we rely on the exemption provided by Rule 10A-3(c)(3) under the Exchange Act.

Mr. Paulo Cesar de Souza e Silva is our audit committee financial expert. Our audit committee is currently composed of three members (all independent, in accordance with the independence requirements of the CVM and Rule 10A-3 under the Exchange Act) and is responsible for, among other matters:

- monitoring, analyzing, and making recommendations to our Board of Directors with respect to the appointment and dismissal of our independent auditors, as well as evaluating the independence of our independent auditors for issuing an opinion on the financial statements and their qualifications and expertise;

- advising our Board of Directors on the review of our annual and quarterly consolidated financial statements, monitoring compliance with relevant legal and listing requirements and ensuring appropriate disclosure of our economic and financial situation filed with the CVM and the SEC;
- advising our Board of Directors and our management, in consultation with internal and independent auditors and our risk management and internal controls units, in monitoring the quality and integrity of our internal control over financial reporting systems, our audited consolidated financial statements and related financial disclosures;
- reviewing and submitting proposals to our Board of Directors relating to the resolution of conflicts between management and the independent auditor relating to our audited consolidated financial statements;
- assessing and monitoring, together with our internal management and audit area, the adequacy of actions to prevent and combat fraud and corruption;
- evaluating and monitoring, jointly with our management and our internal auditors, our transactions with related parties, including a review, at least once a year, of all related party transactions and a previous analysis of related party transactions involving amounts higher than certain levels;
- establishing and reviewing procedures for the receipt, retention and processing of complaints regarding accounting, internal control and auditing matters, including procedures for the confidential submission of internal and external complaints relating to the scope of the committee's activities, as well as receiving, retaining and processing any such complaints;
- evaluating the parameters underlying the actuarial calculations, as well as the actuarial result of the benefit plans maintained by our social security foundation, Fundação Petrobras de Seguridade Social; and
- conducting the formal evaluation of our internal audit executive manager on an annual basis.

For further information relating to potential changes to the composition of our Board of Directors, see "Recent Developments" in this annual report.

With respect to the relationship of our audit committee with our independent auditors, as provided in our Bylaws, our Board of Directors is responsible for deciding, among other matters, the appointment and dismissal of independent auditors and prohibiting our independent auditor from providing consulting services to us during the term of an audit's contract. Our audit committee has the authority to recommend pre-approval policies and procedures for the engagement of our independent auditor's services. Our management is required to obtain the audit committee's pre-approval before engaging independent auditors to provide any audit or permitted non-audit services to us or any of our consolidated subsidiaries. Our audit committee has pre-approved a detailed list of audit services, up to specified monetary thresholds. The list of pre-approved services is updated from time to time. The audit services that are not included in the list, or that exceed the thresholds specified therein, must be directly approved by our audit committee. Our audit committee monitors the performance of the services provided by our independent auditors and reviews and monitors our external auditor's independence and objectivity.



### Principal accountant fees and services

The following table sets forth the fees billed to us by our independent auditors KPMG during the fiscal years ended December 31, 2020 and 2019:

AUDIT AND NON-AUDIT FEES (US\$ MILLION)	2020	2019
Audit fees <sup>(1)</sup>	8.7	10.1
Audit-related fees <sup>(2)</sup>	1.6	1.0
Tax fees <sup>(3)</sup>	0.4	0.3
<b>TOTAL FEES</b>	<b>10.7</b>	<b>11.4</b>

- (1) Audit fees comprise fees billed in connection with the audit of our audited consolidated financial statements (IFRS and Brazilian GAAP), interim reviews (IFRS and Brazilian GAAP), audits of our subsidiaries (IFRS and Brazilian GAAP, among others), comfort letters, consents and review of periodic documents filed with the SEC.
- (2) Audit-related fees refer to assurance and related services that are reasonably related to the performance of the audit or reviews of our audited consolidated financial statements and are not reported under "audit fees."
- (3) Tax fees are fees billed for services related to tax compliance reviews conducted in connection with the audit procedures on our audited consolidated financial statements.

**Additional Information on Members of our Audit Committee**

In reliance on the exemption in Rule 10A-3(b)(1)(iv)(E), two members to our audit committee, Mr. Omar Carneiro da Cunha Sobrinho and Mr. Paulo Cesar de Souza e Silva have been designated by the Brazilian federal government, which is our controlling shareholder. In our assessment, Mr. Sobrinho and Mr. Silva act independently in performing their responsibilities of an audit committee as defined in Rule 10A-3 under the Exchange Act and in accordance with the CVM Rules.

Mr. Rodrigo de Mesquita Pereira is also a member of our audit committee, designated by holders of our preferred shares. Mr. Pereira is independent, as defined in Rule 10A-3 under the Exchange Act and in accordance with the CVM Rules.

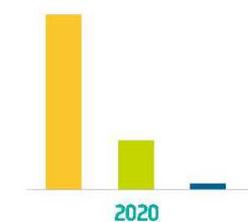
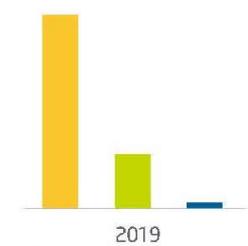
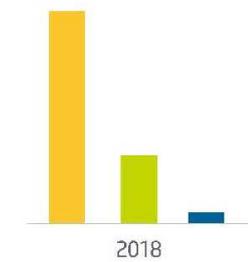
For recent developments relating to potential changes to the composition of our Board of Directors, see “Recent Developments” in this annual report.

# Employees

Our workforce is our most important asset. Our people management is based on meritocracy, inclusion, diversity, dialogue and respect for our employees.

## Our employees' profile

Total Employees at Petrobras



- Petrobras (not including our subsidiaries, joint operations or structure entities)
- Subsidiaries in Brazil
- Subsidiaries Abroad



Total Employees at Petrobras  
(not including our subsidiaries, joint operations or structure entities)

41,485

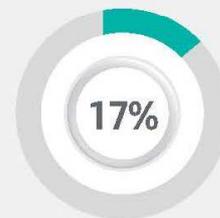
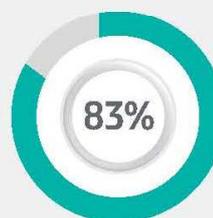
Business Area	2020	2019	2018
Exploration and Production	14,637	17,971	17,910
Refine, Transportation and Marketing	9,385	9,404	9,440
Gas and Power	1,665	1,783	1,688
Others	15,798	17,258	18,518
<b>Total</b>	<b>41,485</b>	<b>46,416</b>	<b>47,556</b>



34,581  
MEN



6,904  
WOMEN



### CORPORATE FUNCTION

Manager	10%	Manager	12%
Supervisor	5%	Supervisor	3%
Specialist	3%	Specialist	2%
Other	82%	other	83%

	As of December 31,		
	2020	2019	2018
<b>Our employees by region (not including our subsidiaries, joint operations or structure entities)</b>			
Southeastern Brazil	34,047	36,077	35,699
Northeastern Brazil	4,910	7,400	8,608
Other locations	2,528	2,939	3,249
<b>Total</b>	<b>41,485</b>	<b>46,416</b>	<b>47,556</b>
<b>Our subsidiaries' employees by region</b>			
Southeastern Brazil	5,216	5,697	7,830
Northeastern Brazil	856	2,328	2,793
Other locations in Brazil	717	2,666	3,312
Abroad	776	876	1,870
<b>Total</b>	<b>7,565</b>	<b>11,567</b>	<b>15,805</b>
<b>TOTAL</b>	<b>49,050</b>	<b>57,983</b>	<b>63,361</b>

We attract and retain talented employees by offering competitive benefits and participation in a variable compensation program, as well as the possibility for professional growth and development based on performance and meritocracy in addition to monthly compensation.

The table below sets forth the main expenses related to our employees for the last three years:

	US\$ millions		
	2020	2019	2018
Salaries	3,037.5	4,184.9	4,355.2
Employee training	6.0	48.9	55.1
Profit-sharing distributions	6.0	43.0	442.0
Variable compensation program	439	643	265

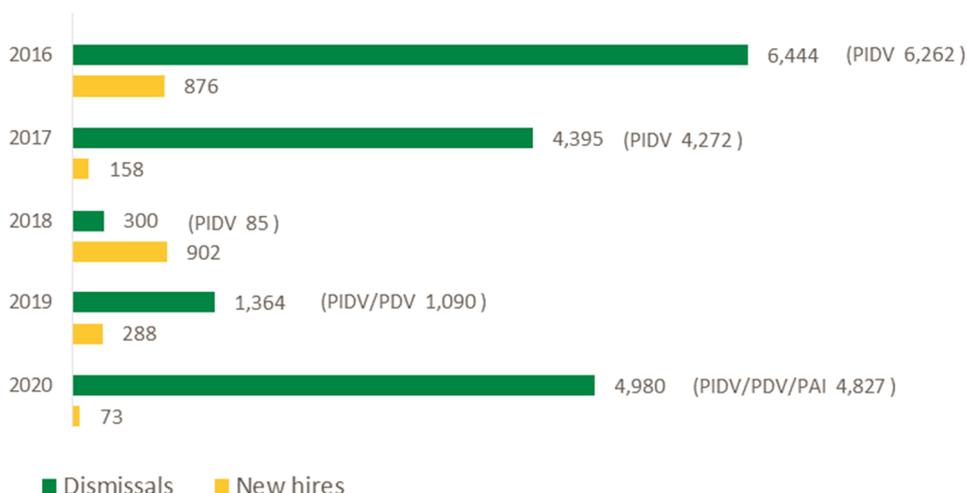
For more information on profit-sharing distributions and variable compensation program see respectively "Labor Relations" and "Employees Variable Compensation" in this annual report.

## Workforce

In accordance with our Strategic Plan, we have been developing an active portfolio management and focusing on the profitability of our operations. To that end, we are seeking to improve our workforce to the business needs, which considers:

- our strategy and future prospects considering partnerships, divestments, asset sales, expansion of activities, etc;
- workforce planning metrics and future of work tendencies;
- knowledge management actions among employees;
- employees’ performance and our interest in retaining staff; and
- cost of dismissals.

### OUR TURNOVER (NOT INCLUDING OUR SUBSIDIARIES, JOINT OPERATIONS OR STRUCTURE ENTITIES)



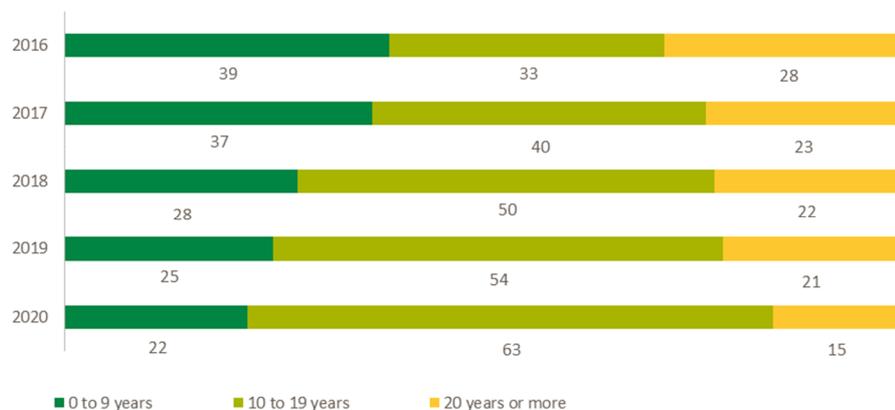
One of the tools for workforce adequacy is the identification of our needs and the efficient allocation of our human resources in order to better align the profile of our professionals with the opportunities available in our company. We have an internal personnel movement program called “Mobiliza”. We adopt two other important tools for staff adjustments: the Voluntary Severance Program (“PDV”), formerly the Voluntary Severance Incentive Program (“PIDV”); and Incentive Retirement Program (“PAI”). In case of business growth or need for specific skills, new hiring programs can be launched by means of public selection processes.

In 2019, we launched a PDV focused on retired employees and other two programs: a program which targets employees of certain areas undergoing divestment processes, and the second program focuses on administrative employees. Until December 31, 2019, 3,294 employees enrolled in these three programs. Regarding the dismissals in 2019, 995 employees left as part of those three PDVs launched in 2019, 12 left as part of the PIDV launched in 2014 and 83 left as part of the PIDV launched in 2016, totaling 1,090 employees.

In 2020, we launched a specific program (“PAI”) focused on employees that, despite meeting the legal conditions for retirement, do not require the benefit for personal reasons. Considering these four programs, three PDVs since 2019 and PAI, launched in 2020, we had 10,567 employees enrolled during 2019 and 2020 until December 31, 2020. Regarding dismissals in 2020, 4,638 employees left as part of the PDVs, 177 employees left as part of th PAI, nine left as part of PIDV launched in 2016 and three left as part of PIDV launched in 2014, totaling 4,827 employees.

The total number of employees who have left our company between 2014 and 2020 due to PIDV, PDV or PAI is 22,417. The total severance paid as a result of these programs was US\$1 billion, amounting to a financial return of US\$7 billion in saved costs between 2014 and 2020.

**TIME IN PETROBRAS (NOT INCLUDING OUR SUBSIDIARIES, JOINT OPERATIONS OR STRUCTURE ENTITIES) (%)**



We have also been hiring employees through different selection processes. In order to determine the number of new employees, we consider both our business demand and our current vacancies.

As the number of dismissals exceeded the number of our new employees in the last several years, the range distribution of our employees by time spent at our company, as well as the age pyramid, underwent significant changes. This created a more balanced professional profile distribution by seniority. Our current workforce profile is appropriate for our growth in terms of knowledge and talent management, which ensures competitive advantage and value to our business.

## Labor Relations

We value transparency in our relationships with all of our stakeholders, including trade unions. We maintain relationships with 17 trade unions and one federation (i.e. a top-level union entity) of oil workers, as well as eight unions and one federation of maritime workers. 43% of our employees are unionized, and 92% of our employees are covered by collective bargaining agreements. These agreements include economic and social clauses relating to work, safety conditions, benefits, and other matters and are valid for two years under the current collective bargaining agreement.

In February 2020 the oil workers' unions launched a strike that lasted 21 days. The strike was against the mothballing of ANSA, one of our subsidiaries, and having no relation with the 2019-2020 collective bargaining agreement. The Superior Labor Court decreed the strike of oil tankers abusive and illegal. Despite the number of days, there was no impact on production.

By June, we began negotiations of the 2020-2022 Collective Bargaining Agreement ("2020-2022 CBA") with all of the oil workers' trade unions. The negotiation was concluded in October with the signature of the Collective Bargaining Agreement by all the unions. The 2020-2022 CBA is valid for two years and ensures a 2.94% increase in meal vouchers in September 2020, the automatic adjustment of wages and benefits for the cost of living in September 2021, guarantee of non-dismissal during its term. In October 2020, we started the negotiations of the 2020-2022 CBA with maritime unions.

Once the negotiation of the Collective Bargaining Agreement was concluded, we began the negotiations on the profit and results sharing agreement for the years 2021 and 2022, which ended in December 2020.

This year we also offered employees who hold a higher education degree and receive a monthly salary of US\$2,366.68 or more the option to negotiate their labor conditions through individual employment agreements. Currently, 8% of our employees are under individual employment agreements.

## Benefits

### Employees Variable Compensation

In 2019, our Board of Directors approved the Performance Award Program (“PPP”), a new variable remuneration model for all our employees. In line with the 2020-2024 Strategic Plan, the PPP aims to enhance meritocracy and bring flexibility to a scenario in which we seek more efficiency and alignment with the best management practices. The PPP was activated in 2019 due to our fulfillment of the minimum requirement to present a net profit above US\$2.5 billion (R\$10 billion) by the end of the 2019 fiscal year. As a result, during 2020, US\$397 million was paid between the advance in the first quarter and settlement in the last quarter.

The settlement of the 2019 PPP payment was originally scheduled to occur in May 2020 but was postponed due to the resilience measures adopted due to the Covid-19 pandemic. Instead, the final payments to employees occurred in November 2020 and the final payments to members of the Executive Board occurred in December 2020, after the payment of dividends to shareholders.

The overall compensation of the administrators (Board of Directors and Board of Executive Officers) is approved annually during the General Meeting, in accordance with Article 152 of the Brazilian Corporate Law (Law No. 6,404, 12/15/1976). The People Committee (“COPE”) is linked to our Board of Directors, and is comprised of board members and / or people in the market that have notable experience and technical capacity. Among its duties, COPE evaluates and proposes policies and mechanisms to the Board of Directors for the remuneration of members of our senior management, in compliance with our strategies and market benchmarks. It is up to the Board of Directors to approve the proposals presented by COPE. The remuneration of Executive Officer members is guided by a consideration of economic and financial results, as well as by the desire to recognize managers’ efforts and their alignment with our short, medium and long term strategies and goals. The remuneration of the members of the Board of Directors corresponds to 10% of the average monthly fees received by these members. There are no differences between the benefit plans and contribution rates of the highest governance body, senior executives and all other employees.

In the calculation of the variable remuneration, the scorecards of organizational units were considered as inputs for the evaluation of directors, executive managers and other members of our corporate structure. These scorecards reported the following items: (i) Net Debt / Adjusted Ebitda results which measured our leverage and Roce results, which measured our return on capital employed; (ii) specific metrics for which organizational units were responsible (represented by specific indicators and strategic initiatives covering economic, environmental and social factors); and (iii) discretionary assessments made by immediate superiors in accordance with an employee's profile and performance. Throughout 2019, the results and projections of top metrics, specific indicators, and strategic initiatives were monitored, making it possible to assess the performance of the organizational units at the end of the year, which in turn served as input for the assessment of personal performance.

For the calculation of our PPP for the 2020 fiscal year, adjustments were made to the 2019 PPP with respect to the metrics that serve as requirements for PPP activation and to our top performance indicators. These adjustments were made to achieve consistency with the 2020-2024 Strategic Plan.

The requirements to activate the 2020 PPP in relation to members of the Board of Executive Officers was the achievement of a positive net income in the 2020 fiscal year. The requirements to activate the 2020 PPP in relation to employees was the achievement of net income, excluding impairment losses or reversals and exchange rate variation, in the 2020 fiscal year.

In addition, the scorecards of the organizational units continue to be considered as inputs for the evaluations made by members of the Board of Executive Officers, executive managers and other members of our company's corporate structure. These scorecards report the following items: (i) the results of key metrics such as Delta Economic Value Added, which measures economic profit in a given period less the cost of capital invested from operating profit); IGEE, which monitors our performance regarding direct emissions of greenhouse gases into the atmosphere; and VAZO, which calculates the total volume of oil leaked, exceeding one barrel, that has reached water bodies or non-waterproofed soil); (ii) specific metrics for which organizational units were responsible (represented by specific indicators and strategic initiatives covering economic, environmental and social factors); and (iii) discretionary assessments made by immediate superiors in accordance with an employee's profile and performance. Throughout 2019, the results and projections of key metrics, specific indicators, and strategic initiatives were monitored, making it possible to assess the performance of the organizational units at the end of the year, which in turn served as input for the assessment of personal performance.

The estimated amount of disbursement will depend on a variety of factors, such as individual employee performance and our performance metrics.

The Profit Sharing Program ("PLR") agreement was signed for the fiscal years 2019 and 2020 only for maritime employees. In December 2020, PLR 2019 was paid to maritime employees after the payment of dividends to shareholders.

Also in December 2020, the agreement established the regulation of the PLR for the 2021-2022 period. The PLR's target audience is employees who do not hold leadership and expert roles (i.e., it would not include individuals holding positions such as managers, specialists and supervisors).

For the payment of the PLR to occur, the following conditions must be met:

- Dividend distribution approval by the Annual General Meeting;
- Net Income Calculation of the reference year; and
- Achievement of an average percentage (weighted) of at least 80% for target indicators established by the Board of Directors in the PLR agreement.

## Main Benefits Granted to Employees

We offer benefits that are commensurate with our size and seek to value our employees. All of our employees are entitled to the same benefits, regardless of their positions or duties. Namely, we offer complementary pension plans, medical assistance and pharmacy benefits. In addition, some of our consolidated subsidiaries have their own benefit plans.

### Pension Plans

Until March 2018, we sponsored two pension plans: (i) the Plano Petros do Sistema Petrobras (“PPSP”), a defined-benefit plan closed to new members, and (ii) the Petros-2 Plan (“Petros 2”), a variable contribution plan, open and in force since 2007, and managed by Petrobras Social Security Foundation – Petros.

In April 2018, the PPSP was split up into two plans: (i) one made up of employees and pensioners, who adhered to the new rules of the plan in 2006, 2007 and 2012 (“PPSP-Renegotiated”) and (ii) one for those employees that did not adhere (“PPSP-Not Renegotiated”). In December 2019, once again, the PPSP-Renegotiated and PPSP-Not Renegotiated plans were split into two new plans each: (i) one for employees and pensioners who joined the plan before 1970 and (ii) one for employees and pensioners who joined the plan after 1970. Thus, apart from Petros 2, there are currently four defined-benefit plans. Together, these plans cover 14.6% of our employees. In addition to Petros 2, 96,1% of our workforce is in a pension plan.

In order to offer a pension plan option separate from the post-70 benefit plan, we, together with Petros, structured a new defined-contribution plan, called the Petros-3 Plan (“PP3”), which will be open for voluntary migration of participants and beneficiaries from PPSP-Renegotiated and PPSP-Not Renegotiated.

PP3 pension plan is a defined contribution plan to which the employer and the employee make contributions on a regular basis. Individual accounts are set up for participants and benefits are based on the account sum plus any biometric (such as longevity or disability) or investment variations along the time.

In January 2021, the Board of Directors received the approval for the PP3 plan from the Superintendência Nacional de Previdência Complementar (“PREVIC”), the Brazilian Pension Funds Regulatory Agency, and the Secretaria de Coordenação e Governança das Empresas Estatais (“SEST”), the Brazilian State-Owned Companies Regulatory Agency.

Petros will proceed with the new migration plan offer and, after this phase, its viability will be confirmed. Then, it will be able to operate the new plan, with the implementation scheduled beginning in the second half of 2021.



## Equalization of Petros Plans

The main purpose of our pension plans is to supplement the social security pension benefits of our retired employees. Thus, our employees make mandatory monthly contributions as participants of our plans, and we do the same as sponsors.

Since 2002, which was the last year that new participants could join the plan, Petros began to observe the deficits in the PPSP. As a result, in 2017, the PPSP underwent an equalization plan due to a total deficit of US\$8.0 billion (as of December 2019). The equalization plan was based on the rules established in the 2015 Deficit Equalization Plan (“DEP 2015”) made by Petros. At the time, the remaining term for this equalization plan was 16 years, and in March 2018 DEP 2015 received the previously outstanding contributions from all participants and from us. These include active and retired employees and pensioners, as well as us, BR Distribuidora and Petros as sponsors, as required by Brazilian law.

We and Petros have also been subject to material legal proceedings in connection with the benefits granted by the Petros plans. In 2019, there were judicial discussions regarding extraordinary contributions of DEP 2015. These discussions led to injunctions that temporarily suspended those extraordinary contributions for certain participants.

After those discussions and a favorable outcome to Petros, contributions to the DEP 2015 began again and the flow of extraordinary monthly contributions was restored until its review through the New Deficit Equalization Plan (“New DEP”).

In March 2020, our Board of Directors deliberated on the New DEP of the PPSP-Renegotiated and PPSP-Not Renegotiated, managed by Petros and in compliance with Brazilian social security legislation.

The New DEP, approved in May 2020 by PREVIC and SEST, came into effect in June 2020. It replaced the DEP 2015, mitigated the deficit registered in 2018, considered the utilization of the plans’ actuarial results achieved in 2019, and the actuarial impacts related to changes in PPSP-Renegotiated and PPSP-Not Renegotiated plans regulations, which was approved by the Board of Directors, in compliance with new Brazilian social security legislation, which allowed the deficit to be refinanced for a new term, throughout the life of the plans. Therefore, it was possible to reduce the extraordinary contributions for most of the participants and beneficiaries and improve the regulations of the plans, which will allow for the revision of the regular contributions and will mitigate the need for new equalization plans in the future.

The remaining balance to be settled by the extraordinary contributions contracted through the New DEP in the PPSP-Renegotiated and PPSP-Not Renegotiated plans was US\$6.1 billion as of December 31, 2020, as recorded in Petros plans balance sheets at present value. Of this total, US\$3.1 billion corresponds to our liability in strict compliance with the principle of contributory parity provided for in Constitutional Amendment No. 20/1998, and adding the remaining obligation arising from a 20-year contract between us and Petros of US\$0.4 billion to cover our share of responsibility for reducing peculium benefits (after death lumpsum benefit) in context of the New DEP.

The effects of the New DEP on our financial statements have been accounted for since the second quarter of 2020, when the New DEP was approved.

For more information on the New DEP, see Note 19.2 to our audited consolidated financial statements.

The table below presents the benefits paid, contributions made, and outstanding pension liabilities for the years ended December 31, 2020, 2019 and 2018:

	US\$ million		
	2020	2019	2018
Total benefits paid – pension plans	1,185	1,552	2,211
Total contributions – pension plans <sup>(1)</sup>	513	699	538
Net actuarial liabilities <sup>(2)</sup>	10,286	14,508	10,514

(1) Contributions by sponsors (except for contributions under the terms of the financial commitment to cover obligations under the pension plans)

(2) Unfunded pension plans obligations.

For more information on the Petros plan, see “Risks – Risk Factors” in this annual report and Notes 4.4 and 19 to our audited consolidated financial statements.

### Health and Pharmacy Benefit Plan

We maintain a supplementary health care plan, the Assistência Multidisciplinar de Saúde (“AMS”), which provides for medical, hospital and dental care services to all active and retired employees and their dependents, through the participation of our employees.

In 2018, the Interministerial Committee on Corporate Governance of State-Owned Enterprises (“CGPAR”) established important drivers for health plan management. CGPAR established new governance and cost guidelines for self-managed health-care benefits of companies controlled by the Brazilian federal state. These guidelines target sustainability and financial-actuarial balance. As of January 2018, we had 48 months to adjust our AMS contribution practices to the new guidelines; however, the adjustments will only occur as a result of the recent 2020-2022 collective bargaining agreement.

During 2020, we had to absorb 70% of these costs and 30% must be paid by health insurance associates. For 2021, the agreement settled with our employee unions state that 60% of the costs will be absorbed by us. The same agreement indicates that we will be responsible for 50% of these costs in 2022, leaving the other half to be paid by health insurance associates.

The changes in the proportion of costs paid by us and our employees in the AMS Plan, brought by the current collective bargaining agreement, led to a reallocation in our liabilities. As of December 31, 2020, we recognized a US\$2,538 million gain relating to past service cost, a portion of which was recognized in service cost (related to active participants) and another portion was recognized in other income and expenses (related to assisted and retired participants).

An independent actuary calculates our commitment related to future benefits for plan participants on an annual basis, based on the projected unit credit method. The health care plan is not funded or otherwise collateralized by assets. Instead, we make benefit payments based on annual costs incurred by plan participants.

The AMS benefit also offers coverage of complementary programs, such as the Benefício Farmácia program. The Benefício Farmácia program only covers drugs from a predefined list of chronic or psychiatric diseases. By choosing to use the Benefício Farmácia, the beneficiary must incur costs as determined in the co-participation system.

#### *New management model of AMS*

In April 2020, our Board of Directors approved a new management model for AMS through the creation of a non-profit association that maintains a self-management and private health care provider model.

The change in the model aims to provide greater corporate security with technology, governance and compliance, through professional management and with expertise in supplementary health. This will enable the improvement of the quality of services and assistance to beneficiaries, as well as greater transparency in their administration, cost efficiency and risk segregation. It should be noted that the new management model will not affect the benefits or scope under the plan.

We expect that the new operator will begin managing the health plan in the first half of 2021.

The table below shows the benefits paid, contributions made and outstanding medical liabilities for the years ended December 31, 2020, 2019 and 2018:

	US\$ million		
	2020	2019	2018
Total benefits paid – medical plan <sup>(1)</sup>	310	442	456
Total contributions – medical plan <sup>(1)</sup>	308	442	321
Net actuarial liabilities <sup>(2)</sup>	5,356	11,986	12,236

(1) Includes AMS and Benefício Farmácia amounts.

(2) Unfunded medical plan obligations.

For more information on our employee benefits, see Notes 4.4 and 19 to our audited consolidated financial statements and “Risks – Risk Factors” in this annual report.



# Compliance and Internal Control

# Compliance

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Ethical principles guide our business and our relations with third parties.

In order to guarantee an ethical environment for our business, we work to promote a culture of integrity, the prevention, detection and correction of incidents of fraud, corruption and money laundering, the management of our internal controls and the integrity analysis of managers and counterparts.

We have a corporate compliance policy that describes and discloses our commitments to the promotion of the transparency in conducting our business ethically, with zero tolerance for fraud, corruption and money laundering.

In order to integrate and strengthen compliance initiatives, in addition to our corporate compliance policy, we also have a code of ethics (“Code of Ethical Conduct”), an Antitrust Code of Conduct, an Ethical Conduct Guide for Suppliers, an ethics commission and an integrity program called Petrobras Corruption Prevention Program (“PCPP”).

## Code of Ethical Conduct

Created in 2020, the new Code of Ethical Conduct is an improvement of the “Code of Ethics” and the “Conduct Guide,” which were merged. The unification of the previous documents is a simple approach, improving the organization’s values, the principles and conduct it expects, promoting elements such as trust, transparency, responsibility, innovation, meritocracy, and good market practices.

Our Code of Ethical Conduct defines the ethical principles that guide our system’s actions and our conduct commitments, both corporate and that of our employees, explaining the ethical sense of our mission, of our vision, and of our Strategic Plan.

The Code of Ethical Conduct also applies to the members of the Board of Directors and its advisory committees, members of the Fiscal Council, members of the Executive Board, employees, interns, service providers and anyone acting on our behalf, including our subsidiaries in Brazil and abroad.

We believe the Code of Ethical Conduct is aligned with the best corporate integrity practices and represents another step towards strengthening our integrity culture. It is based on our values such as respect for life, people and the environment, ethics and transparency, outperformance and confidence, market orientation, and results. Based on these values, the three main principles that support the guidelines of the Code of Ethical Conduct are:

- Respect for life, people and the environment;
- Integrity, transparency and meritocracy; and
- Value creation.

Our commitments of conduct are: example, accountability, trust, courage, union, cooperation, innovation, continuous improvement, results, reputation and transparency.

Our Code of Ethical Conduct is available on our website. The information on our website is not and shall not be deemed to be incorporated into this annual report.

## Antitrust Code of Conduct

The review of the Antitrust Code of Conduct was approved by our Executive Board in May 2020. It summarizes the applicable legislation, provides control for internal procedures, ensuring compliance with principles and rules and serves as a general guide for our managers and employees. Acting in compliance with the Antitrust Code is essential to avoid penalties for antitrust breaches, as well as to prevent anti-competitive practices by third parties against us.

## Ethical Conduct Guide for Suppliers

In October 2020 we approved the Ethical Conduct Guide for Suppliers. It is the first document exclusively aimed at our suppliers, with guidelines on expected values and ethical behavior. The Ethical Conduct Guide for Suppliers applies to all suppliers, in Brazil or abroad, that are involved in business processes and have signed contracts, agreements and terms of cooperation with us. The Ethical Conduct Guide for Suppliers reaffirms our zero tolerance to any form of fraud and corruption, demanding the same stance from our supply chain. The Ethical Conduct Guide for Suppliers was elaborated in accordance with the best international practices and is aligned with the guidelines of the Dow Jones Sustainability Index, the B3 Corporate Sustainability Index and the Corporate Human Rights Benchmark. The Ethical Conduct Guide for Suppliers reinforces that suppliers must promote decent and safe working conditions for their employees, combat child and slavery labor and respect the environment. The Ethical Conduct Guide for Suppliers also determines that suppliers must promote diversity, gender and racial equality and the inclusion of people with disabilities. The Ethical Conduct Guide for Suppliers brings an evolution by consolidating the principles and ethical guidelines applicable to suppliers in a single document. The observance of this Ethical Conduct Guide by all suppliers is crucial for us to achieve our goals in an ethical and transparent way and is aligned with our ESG – Environmental, Social and Governance standards.

## Ethics Commission

Our ethics commission is responsible for promoting corporate compliance with ethical principles and serves as a forum for discussion of subjects related to ethics. Our ethics commission also serves in a consulting capacity for our management and workforce, providing recommendations with respect to topics related to ethics management, proposing rules for the incorporation of new concepts, and adopting measures to comply with legislation and follows best practices that reinforce our zero tolerance approach to acts of misconduct.

Our ethics commission is composed of employees appointed after an internal selection process consisting of interviews and resumes review. Our Board of Directors and our Board of Executive Officers approve each new appointment.

## Petrobras Corruption Prevention Program

The PCPP, our integrity program, is driven by ongoing actions to prevent, detect, and correct ethical deviations, including fraud, corruption and money laundering. The program is aimed at our various stakeholders, such as senior management, customers, investors, partners, public authorities, company employees and suppliers.

In performing our activities in Brazil and abroad, we are subject to national and international anti-corruption laws. We work to continually improve our integrity program. It adheres to best practices and anti-corruption laws, particularly Law No. 12,846/13 (Brazilian Anti-Corruption Act), the FCPA and the U.K. Bribery Act.

Pursuant to the PCPP, we undertake Integrity Due Diligence on our counterparties, seeking to assess the integrity risks inherent in our business relationships. We communicate to our managers the findings of such due diligence in terms of integrity risk and our managers consider these findings in their decision-making processes. In 2020, our team evaluated 3,101 counterparties.

In addition, we perform Integrity Background Check for individuals appointed by us for key positions in our company and our subsidiaries and affiliates. This procedure aims to assist managers in making decisions considering the degree of exposure to integrity risks and proposes mitigation measures. In 2020, we conducted 6,790 integrity assessments for key positions.

We have also developed other integrity mechanisms. These mechanisms deal with topics such as: conflicts of interests; nepotism; illegal acts such as fraud and corruption; receiving or offering gifts and entertainment; transparency in actions and resources for sponsored projects; Bid-Tailoring favoritism, bribery or facilitation payment; payment of funds to foreign governments; anti-corruption laws; international embargoes and sanctions; internal investigations; internal controls; accounting practices and records of assets and liabilities; information security; overpricing and underpricing; and relationships with public authorities. In order to raise workforce awareness, we disseminate guidelines on proper conduct and reinforce our ethical values through publications and communications in our internal channels.

We offer e-learning training for all our employees, particularly employees working on activities with greater exposure to compliance risks, as well as the members of our Board of Executive Officers and our Board of Directors.

In 2020, we offered training on the Code of Ethical Conduct to approximately 42,000 employees, in order to present the main aspects of the document. From July 31 through September 30, 2020, we undertook a campaign aiming to have all employees sign the term in which they declare that they have knowledge of the Code of Ethical Conduct's content, when we reached a rate of 98.5% of total employees who have signed the acknowledgement term.

In addition, due to social distance measures in order to control the Covid-19 pandemic, we have reformulated our face-to-face integrity program courses to e-learning training. In 2020, we trained:

- 5,472 managers;
- 1,686 employees who perform activities that are more exposed to compliance risks, such as our employees involved in procurement processes and contract management;
- 1,103 professionals involved in trading and portfolio management activities; and
- 50 professionals, including compliance professionals, internal audit and ombudsman.

In 2019, we decided to develop and implement a multi-language training focused on our counterparties. The training is available to counterparties in a manner that prioritizes those who offer us the greatest risk. Although it is not mandatory, it assists in fulfilling the obligations entered into by these counterparties when signing a contract with us. In 2020, 710 members from our counterparts completed the training.

In 2020, we also provided training sessions to directors and senior management, covering mainly the following topics:

- Code of Ethical Conduct;
- Law No. 13,709/2018 – General Personal Data Protection Law (“GDPL”);
- Our model of corporate governance and decision-making process;
- Internal controls and related party transactions;
- Tone at the top - Top management’s commitment to the compliance culture;
- Risk management;
- Compliance;
- Business performance;
- Brazilian anti-corruption law; and
- Prevention of money laundering and terrorism financing.

In 2020, we also promoted the following initiatives:

Initiative	Description	Improvements In 2020
<b>Petrobras Integrity Dialogues</b>	Annually, for the past seven years, we held, in December, an event in observance of the International Anti-Corruption Day stated by United Nations (UN). In 2020, we promoted the "Petrobras Integrity Dialogues".	<p>The event was fully remote and assembled notable key-speakers of international organisms, universities, public and private sector to exchange experiences and knowledge about how we can improve the culture of integrity in business and society.</p> <p>For four days, we hosted discussions, round tables and dialogue with compliance authorities and specialists. We also presented our progress and challenges in combating fraud, corruption, and money laundering. To open the event, we received a Minister of Federal Supreme Court of Brazil. Other participants included: senior management (including of our subsidiaries); executive managers; general managers; authorities and experts; members of the ethics committee; members of the integrity committee; governance and compliance employees; press; academics; anti-corruption organizations; chief compliance officers of other companies, including state-owned companies; and general public.</p>
<b>Tone at the Top Strengthening</b>	Senior management continuous communication to the workforce	Senior management recorded pocket videos directed to our workforce reinforcing our widespread commitment towards compliance in order to strengthen our ethical culture.
<b>Integrity Channel</b>	Virtual knowledge base, available in the Workplace tool for our internal audience, through which specialized content curation is offered, and reference knowledge on Integrity, Ethics and Compliance.	<p>It was created in June 2020, engaging more than 54 thousand employees. Over than 350 contents are available in the knowledge base, including Integrity Moments, and Integrity Pills.</p> <p>The knowledge base is organized in Units of Learning, divided in categories: Legislation and External Guidelines; Rules and regulations; External Research; Case Studies; Good practices; Articles; Podcasts; Webinars; Books; Websites; Films and Series.</p>

## Partnering Against Corruption Initiative (PACI)

In 2020 we became signatory to the Partnering Against Corruption Initiative ("PACI") of the World Economic Forum. PACI is the leading international anti-corruption organization with compliance officers from large multinationals, international organizations and governments. The initiative acts as a global platform for collective action, working so that companies can maximize their collective impact in the fight against corruption through the exchange of experiences, guaranteeing conditions of fair competition and creating healthier and more transparent markets. We were previously a member of the organization from 2005 to 2014, and our return is in recognition of our efforts to promote transparency and fight against corruption in recent years.

## Related Party Transactions

In order to comply with Law No. 13,303/16 and Decree No. 8,945/16, our Board of Directors approved the annual review of our policy for related party transactions in November 2020, aiming at fostering transparency in our procedures and conducting better corporate governance practices and the CVM provisions. This policy also aims to guarantee the adequate and diligent decision-making process by our management, observing market conditions or appropriate compensation mechanics, in the event of potential conflicts of interest.

Any related-party transaction in which we are involved and that meets the criteria established in our policy, must be previously analyzed by our Audit Committee, which has to report its conclusions to our Board of Directors on a monthly basis.

Our policy provides for a strict governance procedure for proposed transactions directly or indirectly involving our controlling shareholder. In such cases, whenever there is a need to evaluate potential transactions with the Brazilian federal government, its municipalities, foundations or federal state-owned enterprises, our Minority Committee must issue an opinion on the proposed transactions, provided that such transactions (i) are not in our ordinary course of business and (ii) fall within the purview of our Board of Directors for approval. Any such transaction must be approved by two-thirds of the present members at the meeting of our Board of Directors.

For additional information regarding our outstanding related party transactions, see Note 39 to our audited consolidated financial statements.

### Transactions with our Board of Directors or Executive Officers

Direct transactions with members of our Board of Directors or our executive officers must follow the conditions of an arms-length transaction and market practice guiding transactions with third parties. None of our Board of Directors members, our executive officers or close members of their families has had any direct interest in any transaction we effected that is or was unusual in its nature or conditions, or material to our business during the year, and which remains in any way outstanding or unperformed. In addition, we have not entered into any transaction with related parties which is or was unusual in its nature or conditions during the current or the three immediately preceding financial years, nor is any such transaction proposed, that is or would be material to our business. We have no outstanding loans or guarantees to the members of our board of directors, executive officers, key management personnel or any close member of their families.

For a description of the shares beneficially held by the members of our board of directors and close members of their families, see “Management and Employees – Management – Additional Information on our Board of Directors and Board of Executive Officers – Share Ownership” in this annual report.

## Transactions with the Brazilian Federal Government

We have engaged, and expect to continue to engage, in the ordinary course of business in numerous transactions with our controlling shareholder, the Brazilian federal government, and with banks and other entities under its control, including financing and banking, asset management and other transactions. These transactions resulted in a net asset of US\$6,505 million due from the Brazilian federal government and other entities under its control as of December 31, 2020.

On November 30, 2020, there was a final decision in relation to the Petroleum and Alcohol Account lawsuit filed in 2011. As of December 31, 2020, this receivable amounted to US\$482 million. In addition, in 2020, we recorded a US\$235 million gain within net finance income (expense), including inflation indexation and interests, of which US\$228 million arising from the difference between the Reference Rate and the IPCA-E of the outstanding balance, which was under dispute.

In addition, we are allowed to invest in securities issued by the Brazilian federal government in Brazil and also abroad, provided that the legal and regulatory requirements are met and taking into consideration market’s best practices and the conservatism that should guide our investments.

As of December 31, 2020, the value of securities issued by the Brazilian federal government that have been directly acquired and held by us amounted to US\$1,632 million.

For further information on related party transactions, see Note 39 to our audited consolidated financial statements.

## Transactions with Eletrobras’ Subsidiaries

In 2019, we and Apolo Investment Fund in Credit Rights (Apolo Fundo de Investimento em Direitos Creditórios) entered into an assignment agreement without recourse relating to all credit rights under the debt acknowledgement by energy distributors in 2014, which financial settlement occurred for the amount of US\$2,251 million, with a US\$128 million discount.

As of December 31, 2020, the receivables from the isolated electricity system amounted to US\$ 205 million.

# Controls and Procedures

## Disclosure Controls and Procedures

We, together with our CEO and CFO, have evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2020. Our CEO and CFO concluded that our disclosure controls and procedures were effective to provide reasonable assurance that the information we are required to disclose in the reports that we file or submit under the Exchange Act was being recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms. They also concluded that such disclosure was compiled for and communicated to our management, including our CEO and CFO, as appropriate, to allow for timely decisions regarding the required disclosure.

Although we have faced the Covid-19 pandemic and, as a consequence, have adopted preventive measures, the effects of the Covid-19 pandemic did not materially affect our internal control over financial reporting. For more information, see “Our Business—Our responses to the Covid-19 Pandemic” in this annual report.

## Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing, adequately maintaining and assessing the effectiveness of internal control over financial reporting. Such internal control is a process designed by, or under the supervision of our CEO and CFO, and effected by our board of directors, management and other employees.

The internal control over financial reporting is designed to provide reasonable assurances regarding the reliability of financial reporting and of the preparation of our consolidated financial statements for external purposes, in accordance with IFRS, as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk of becoming inadequate because of changes in its conditions and assumptions.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2020 based on the criteria established in “Internal Controls – Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of Treadway Commission (“COSO”). Our management has concluded that our internal control over financial reporting was effective.

## Audit of the Effectiveness of Internal Control over Financial Reporting

Our independent registered public accounting firm has audited the effectiveness of our internal control over financial reporting as of December 31, 2020, as stated in their report, which is included herein.

## Changes in Internal Control over Financial Reporting

In 2020, we implemented changes in our controls related to the valuation and composition of assets in the E&P segment, due to changes in the tax and customs legislation for the economic use of goods intended to oil and natural gas exploration, development and production activities (Repetro-Sped). There were no other significant changes that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

## Ombudsman and Internal Investigations

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Our general ombudsman office provides channels for receiving comments from our internal and external audience, such as complaints, requests for information, general requests, suggestions, compliments and denouncements.

In order to receive complaints, we provide a specific denouncement channel, operated by an independent external company, and allowing for anonymity of the informants.

All complaints received through the whistleblower channel are forwarded to the ombudsman's office, which analyzes, classifies, and routes them for follow-up by the appropriate area. Allegations regarding compliance issues, which include fraud, corruption and other matters, are sent to the governance and compliance office.

We continuously reaffirm and reinforce our zero-tolerance approach toward fraud and corruption, including by thoroughly investigating all allegations that arise. We take allegations of misconduct seriously – in particular allegations of corruption – and are committed to promptly cooperating with all authorities regarding such investigations, including the Federal Public Prosecutor's Office, Brazilian federal police and advisory bodies (the CVM, CGU and TCU). Our governance and compliance office has full access, independence, qualification and autonomy to thoroughly investigate allegations of this nature.

Upon the conclusion of each investigation, we use its material findings to improve our compliance efforts. If the findings in some instances indicate that any of our former and current employees did not comply with certain internal policies, we may take action in accordance with applicable labor laws and our applicable employment policies.

Irrespective of the findings of our internal investigations, in order to mitigate potential risks of further non-compliance with our internal policies, we continue to develop and implement a number of measures aimed at improving corporate governance, our management of processes and risk management and controls, including those related to fraud and corruption.



# Shareholders Information

# Listing

We are a publicly traded company and we are listed in Brazil and abroad, as follows:

STOCK* EXCHANGE	 <b>BRAZIL</b>	 <b>USA</b>
	CAPITAL MARKET REGULATOR <b>CVM</b>	CAPITAL MARKET REGULATOR <b>SEC</b>
		
CORPORATE GOVERNANCE	<b>LEVEL 2</b>	<b>LEVEL 3</b>
SHARES AND ISIN CODES	 <b>PETR3</b> BRPETRACNOR9  <b>PETR4</b> BRPETRACNOR9	<b>PBR</b> US71654V408 <b>PBRA</b> US71654V101
CLOSING PRICE DECEMBER 31, 2020	 <b>PETR3 R\$ 28.85</b>  <b>PETR4 R\$ 28.34</b>	 <b>PBR U\$ 11.23</b>  <b>PBRA U\$ 11.06</b>
TOTAL NUMBER OF SHARES** DECEMBER 31, 2020	<b>13,044,201,261</b>	
	PETR3: 5,574,043,540 SHARES PETR4: 4,957,951,549 SHARES	PBR: 1,868,187,842 ADRs PBRA: 644,018,330 ADRs

-  COMMON SHARES
-  PREFERRED SHARES

\* Additionally, our common (XPBR) and preferred (XPBRA) shares have been traded on the LATIBEX, Spain, since 2002 under ISIN codes BRPETRACNOR9 and BRPETRACNPR6, respectively. The LATIBEX is an electronic market created in 1999 by the Madrid Stock Exchange in order to enable trading of Euro-denominated Latin American equity securities.

\*\* The total number of shares does not include 295,669 shares in treasury, of which 222,760 are common shares and 72,909 are preferred shares.

\*\*\* On December 31, 2020, the controlling group was composed of the Brazilian federal government, BNDES and BNDESPar.





## Delisting in Argentina

On November 11, 2019, we delisted our common and preferred shares from *Bolsa de Comercio de Buenos Aires*, the Buenos Aires Stock Exchange and withdrew from the public reporting regime in Argentina. Due to the delisting, our shareholders in Argentina have the option to either maintain their shares deposited with the Argentinian market custodian, or sell them in markets where our shares are still traded.

The delisting is in accordance with our business strategy, which focuses on cost reduction and concentration in our core business operations.



## Corporate Governance of B3 – Level 2

Since 2018, we have been listed in the corporate governance Level 2 listing segment of the B3. Below are some of our corporate governance practices implemented due to our listing on the Level 2 listing segment:

- the attributions of our minority committee were expanded;
- our Board of Directors is composed of at least 40% independent members;
- we started to disclose an annual calendar of corporate events;
- we must assure 100% of tag along to holders of our preferred shares – under the same conditions granted to holders of our common shares; and
- we provide an arbitration procedure for matters arising from, and relating to, Level 2 rules and regulation.

## Shares and Shareholders

Our capital stock is composed of common and preferred shares, all without par value and denominated in *reais*. Under Brazilian Corporate Law, the number of our preferred shares may not exceed two-thirds of the total number of our shares.

Our shares are negotiated on the B3 and registered in book-entry form. Banco Bradesco performs services of safekeeping and transfer of shares.

Holders of our common shares are entitled to one voting right for each unit of common shares held. Holders of our preferred shares are not entitled to voting rights, except for: (i) the right to appoint one member of our Board of Directors and one member of our Fiscal Council; and (ii) certain matters relating to preferred shares (such as creation, increasing, changes in the preferences or creation of a new class), whenever rights of holders of preferred shares are adversely affected.

In the U.S., our common or preferred shares, which are evidenced by ADRs, are listed in the form of ADSs on the NYSE. The ADSs are registered and delivered by a depositary bank, JPMorgan Chase Bank, N.A. (“JPMorgan” or “Depositary”) which, since January 2, 2020, acts as the depositary for both of our common and preferred ADSs. The ratio of ADR to our common and preferred shares is two shares to one ADR.

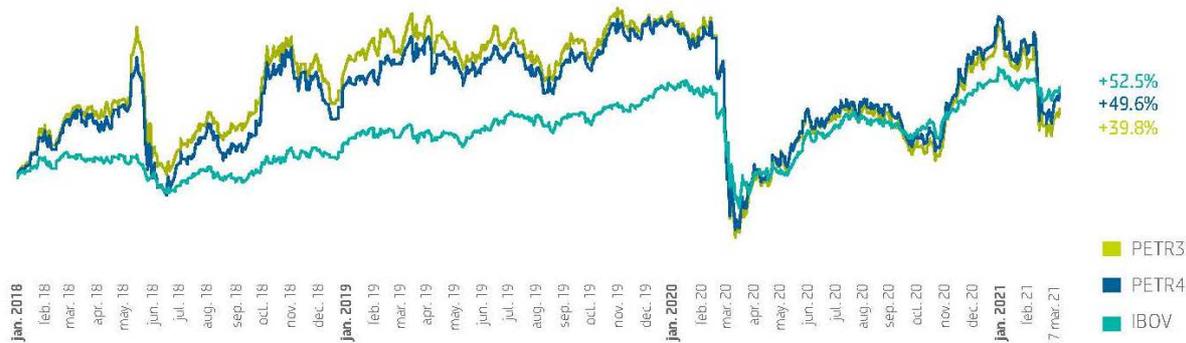
The rights of ADS holders differ from shareholders’ rights. With respect to voting rights, ADS holders may only vote by means of proxy voting cards mailed to the ADR depositary bank while shareholders have the right to vote directly at the shareholders’ meeting.

On December 31, 2020 there were 1,868,187,842 outstanding common shares and 644,018,330 outstanding preferred shares represented by ADSs. There has been no change in the past four fiscal years in the amount of our issued share capital, as well as in the number of our common and preferred shares or in the voting rights of our common and preferred shares. See Exhibit 1.1 to this annual report for a copy of our Bylaws.

In the beginning of 2021, our stock value decreased, and as of March 23, 2021, our stock price was US\$ 8.15 (PBR) and US\$ 8.25 (PBR/A). In 2020, our stock value was affected by the impact of Covid-19 pandemic and Brent prices reduction, underperforming the IBOV at the B3. Our stock value increased in 2019, maintaining the growth performance of 2018, and outperformed our peers at the NYSE (Amex Oil index or AMEXOIL), as well as performed slightly below the Ibovespa index (or IBOV) at the B3.

### STOCK PERFORMANCE SINCE 2018

Index No = 100 on 01/01/2018

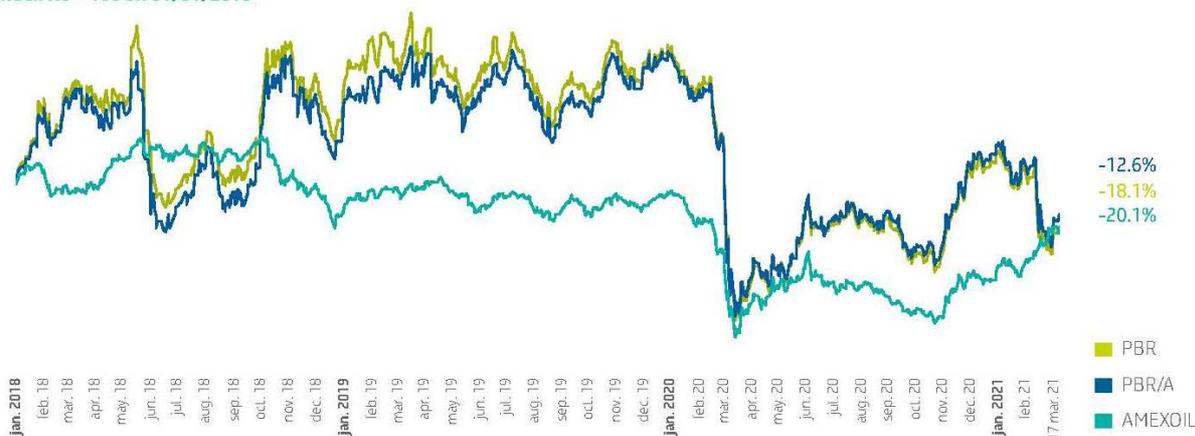


	Common Shares (PETR3):	Preferred Shares (PETR4):	Market value*:
Appreciation in 2020:	-9.8%	-6.1%	+82.7% / R\$ 310.8 billion
Stock Value as of March 17, 2021*:	R\$ 23.64	R\$ 24.08	Ibovespa* +56.2%
Appreciation in LTM of March 17, 2021:	+80.7%	+85.2%	

\* Information regarding LTM of March 17, 2021.  
Source: Bloomberg

### ADR PERFORMANCE SINCE 2018

Index No = 100 on 01/01/2018



	ADRs representing Common Shares (PBR):	ADRs representing Preferred Shares (PBRA):	Market value*:
Appreciation in 2020:	-29.7%	-26.4%	+58.6% / US\$ 55.4 billion
Value as of March 17, 2021*:	US\$ 8.43	US\$ 8.59	AMEXOIL* +98.6%
Appreciation in LTM of March 17, 2021:	+56.1%	+62.1%	BRENT OIL* +136.7%

\* Information regarding LTM of March 17, 2021.  
Source: Bloomberg

The following table sets forth information concerning the ownership of our common and preferred shares as of February 28, 2021 by the Brazilian federal government and certain public sector entities:

Shareholders	Common Shares	%	Preferred Shares	%	Total Shares	%
Brazilian federal government	3,740,470,811	50.26	—	—	3,740,470,811	28.67
BNDES	—	—	135,248,258	2.41	135,248,258	1.04
BNDES Participações S.A. – BNDESPar	17,700,392	0.24	900,210,496	16.07	917,910,888	7.04
All members of our Board of Directors (permanent and alternate), executive officers and members of our Fiscal Council (permanent and alternate) (24 people in total)	34,108	0.00	356,542	0.01	390,650	0.00
Others	3,684,248,831	49.50	4,566,227,492	81.51	8,250,476,323	63.25
<b>TOTAL</b>	<b>7,442,454,142</b>	<b>100.00</b>	<b>5,602,042,788</b>	<b>100.00</b>	<b>13,044,496,930</b>	<b>100.00</b>

For detailed information on the shares held by the members of our Board of Directors, executive officers and members of our Fiscal Council, see “Management and Employees” in this annual report.



### Public offerings of secondary distribution of shares

In February 2020, BNDES sold 734,202,699 of our common shares through a public secondary offering, simultaneously distributed in Brazil and abroad (in form of ADSs) at a price of R\$30.00 per share, totaling R\$22,026,080,970.00. As each ADS represents two underlying shares, the ADSs’ price is equivalent to twice the price per share converted to U.S. dollars, based on the exchange rate for the sale of that currency (PTAX) released by the Central Bank of Brazil.

Under Brazilian Corporate Law and Law No. 13,303/16, the Brazilian federal government is required to own at least a majority of our voting shares.

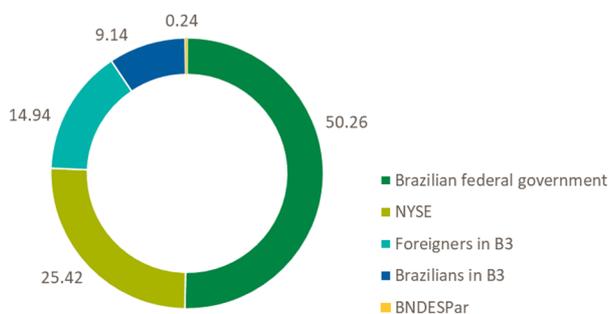
Although the Brazilian federal government does not have different voting rights than our other shareholders, as long as it holds a majority of our voting share, any change in our control would require a change in applicable laws. Our Bylaws also provide for rules applicable to any eventual transfer of control of our major shareholders.

The majority of our voting shares also gives the Brazilian federal government the right to elect a majority of our directors, regardless of the rights our minority shareholders may have to such election according to our Bylaws.

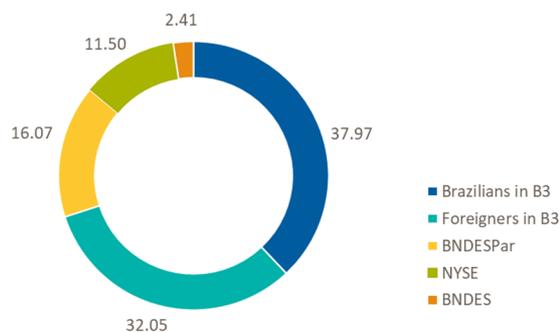
Additionally, our Bylaws clearly state that we may have our activities guided by the Brazilian federal government in order to contribute to the public interest that justified our creation. However, if the Brazilian federal government’s guidelines lead us to undertake obligations and responsibilities under conditions different from those of any other company in the private sector that operates in the same market, such obligations and responsibilities shall be defined in law or regulation and shall have their costs and revenues broken down and disclosed. In addition, the Brazilian federal government shall compensate us, at each fiscal year, for the difference between market conditions and the operational result or economic return from such obligation.

Our shareholding base includes over 750,000 shareholders at the B3 and ADR accounts at the NYSE.

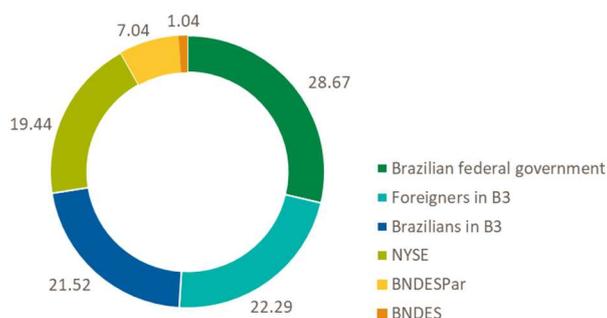
**VOTING CAPITAL <sup>(1)</sup> (%)**



**NON-VOTING CAPITAL <sup>(1)</sup> (%)**



**TOTAL CAPITAL <sup>(1)</sup> (%)**



The majority of our voting rights are held by the Brazilian federal government through a block composed of the Brazilian federal government and BNDESPar, which together hold 50.50% of our shares with voting rights.

(1) Information about our shareholders as of February 28, 2021.

Pursuant to CVM rules, any (i) direct or indirect controlling shareholder, (ii) shareholder who has elected members of a Brazilian public company's Board of Directors or Fiscal Council, and (iii) person or group of persons representing the same interest, in each case that has directly or indirectly acquired or sold an interest that exceeds (either upward or downward) the threshold of 5%, or any multiple thereof, of the total number of shares of any type or class, must be disclosed by such Brazilian public company, immediately after the acquisition or sale of shares, to the CVM and the B3.

## Self-Dealing Restrictions

In accordance with our Relevant Act or Fact Disclosure and Negotiation of Securities Policy, the trading by us or any related party of securities issued by us, our subsidiaries or our associates (that are public companies) is forbidden, in the following periods:

(i) 15 days before the disclosure of our quarterly information and annual information; and (ii) in the period between the decision taken by the competent corporate body to increase or reduce the share capital, to distribute dividends, bonus shares or issue other securities by us, and the publication of the respective notices or announcements.

Our directors, the members of our audit committee, their respective alternates and members with any technical or advisory functions created by provisions of our Bylaws, are obliged to inform us in the event of ownership and trading of securities issued by us or our subsidiaries, which are public companies. They should also indicate the securities issued by us and/or our subsidiaries, which are public companies, owned by related persons.

## Dispute Resolution

As a company listed on the B3's Level 2, our Bylaws provide for mandatory dispute resolution, by means of arbitration before the Câmara de Arbitragem do Mercado, or the Market Arbitration Chamber, concerning any dispute or controversies that may arise among us, our shareholders, our management and members of our Fiscal Council, related to or arising from the application, validity, effectiveness, interpretation, violation and effects of the provisions contained in the applicable Brazilian law, regulations and our Bylaws.

Entities that are part of the direct and indirect public administration, as our company and our controlling shareholder, may use arbitration as a dispute resolution mechanism only for disputes involving negotiable economic rights. As a result, such entities cannot submit to arbitration any rights deemed non-negotiable under Brazilian law (direitos indisponíveis), such as those deemed to relate to public interest. Therefore, decisions of the Brazilian federal government exercised at any general shareholders' meeting, if based or related to public interest, will not be subject to an arbitration proceeding.

# Shareholders' Rights

## Shareholders' Meetings and Voting Rights

Our shareholders have voting rights at the shareholders' meeting to decide on any matters related to our corporate purposes and to pass any resolutions they deem necessary for our protection and development, except for certain matters whose authority to resolve are exclusively held by our corporate governing bodies.

Our annual shareholders' meeting takes place at our headquarters, in Rio de Janeiro, Brazil, in April of each year. Additionally, our Board of Directors or, in some specific situations set forth in Brazilian Corporate Law, our shareholders or Fiscal Council, may call our extraordinary shareholders' meetings. Given the effects of the Covid-19 pandemic in Brazil and the measures taken by health authorities and governments to address the pandemic, particularly regarding social distance measures, the annual shareholders' meeting was held exclusively virtually, as permitted by Instruction CVM No. 622/2020.

The notice of the annual shareholders' meeting and related documents must be published at least 30 calendar days prior to the scheduled meeting date.

For ADS holders, we are required to provide notice to the ADS depository at least 30 calendar days prior to a shareholders' meeting. Upon receipt of our shareholders' meeting notice, the depository must fix the ADS record date and distribute to ADS holders a notice. This notice must contain (i) final information particular to such vote and meeting and any solicitation materials, (ii) a statement that each holder on the record date set by the depository will be entitled to instruct the depository as to the exercise of the voting rights, subject to any applicable provisions of Brazilian law as well as our Bylaws, and (iii) a statement as to the manner in which these instructions can be given, including instructions to give a discretionary proxy to a person designated by us. Our shareholders may vote in person, at the meeting, or remotely, prior to the date of the meeting. Electronic participation in shareholders' meetings is not available to ADS holders, which may only vote by means of proxy voting cards mailed to the ADR depository bank.

## Quorum

*Attendance quorum.* In order to start, shareholders representing at least one-fourth of our issued and outstanding common shares must attend our shareholders' meeting, except when the matter to be decided aims to amend our Bylaws. In this case, a valid meeting requires the attendance of shareholders representing at least two-thirds of our issued and outstanding common shares. If the required quorum is not reached, our Board of Directors may call a second meeting by sending a notice at least eight calendar days prior to the new scheduled meeting. The attendance quorum requirements will not apply to such second meeting, but the voting quorum requirements described below shall be observed.

*Voting quorum.* Matters to be approved at our shareholders' meeting must be approved by the quorums specified below.

### **Matter approved by majority vote (of holders of common shares attending the meeting):**

- amend our Bylaws;
- approve any capital change;
- elect or dismiss members of our Board of Directors and Fiscal Council (and its respective alternates), subject to the right of our preferred shareholders to elect or dismiss one member of our Board of Directors and to elect one member of our Fiscal Council (and its respective alternates) and to the right of our employees to elect or dismiss one member of our Board of Directors;
- receive the yearly financial statements prepared by our management and accept or reject management's financial statements, including the allocation of net income for payment of the mandatory dividend and allocation to the various reserve accounts;
- authorize the issuance of debentures, except for the issuance of non-convertible unsecured debentures or the sale of such debentures when in treasury, which may be approved by our Board of Directors;
- accept or reject the valuation of assets contributed by a shareholder in consideration for increase of capital stock;
- approve the disposal of convertible debentures issued by our wholly-owned subsidiaries and held by us;
- establish the compensation of the former members of our Board of Executive Officers, our Board of Directors, our Fiscal Council, including the compensation due during the period of six months of forfeiture provided for in our Bylaws, and of advisory committees to our Board of Directors;
- approve the cancellation of our registration as a publicly-traded company; and
- approve the requirements of our nomination policy, in addition to the requirements provided by law applicable to boards of directors and fiscal councils.

### **Matter approved by at least one-half of the common shares of our total capital stock:**

- reduce of the mandatory dividend distribution;

- merge into another company or consolidate with another company, subject to the conditions set forth in Brazilian Corporate Law;
- participate in a group of companies subject to the conditions set forth in Brazilian Corporate Law;
- change our corporate purpose, which must be preceded by an amendment to our Bylaws by federal law, as we are controlled by the Brazilian federal government and our corporate purpose is established by law;
- spin-off of a portion of us, subject to the conditions set forth in Brazilian Corporate Law;
- waive the right to subscribe to shares or convertible debentures issued by our wholly-owned subsidiaries or associate;
- decide on our dissolution;
- create preferred shares or increase the existing classes of preferred shares, without preserving the proportions to any other class of preferred shares, except as set forth in or authorized by our Bylaws;
- change the preferences, privileges or redemption or amortization conditions of any class of preferred shares; and
- create new class of preferred shares entitled to more favorable conditions than the existing classes.

**Matter approved by a special quorum:**

- select a specialized company to work out the appraisal of our shares by economic value in the event of the cancellation of our registry as a publicly-traded company, which matter must be approved by the majority of votes from the holders of the outstanding shares that are present at the meeting. According to B3's Level 2 regulation, outstanding shares means all the shares issued by a company, except for the shares held by the controlling shareholder, by persons linked to such controlling shareholder and by our managers, as well as those shares in treasury and special class of preferred shares which purpose is to guarantee differentiated political rights and, be non-transferable and exclusive property of the privatizing entity. This matter must only be discussed in a shareholders' meeting installed with the presence of at least 20% of the holders of the outstanding shares in a first call, or the presence of any number of holders of the outstanding shares in a second call.

Pursuant to Law No. 13,303/16, no decision taken at any shareholders' meeting can change the corporate status of our company (i.e. sociedade anônima).

Under Brazilian Corporate Law, if a shareholder has a conflict of interest with a company in connection with any proposed transaction, the shareholder may not vote in any decision regarding such transaction. Any transaction approved with the vote of a shareholder having a conflict of interest may be annulled and such shareholder may be liable for any damages caused and be required to return to us any gain it may have obtained as a result of the transaction.

Also under Brazilian Corporate Law, minority shareholders representing at least 10% of our voting capital have the right to demand that a cumulative voting procedure be adopted to entitle each common share to as many votes as there are board members and to give each common share the right to vote cumulatively for only one candidate of our Board of Directors or to distribute its votes among several candidates. Pursuant to regulations promulgated by the CVM, the 10% threshold requirement for the exercise of cumulative voting procedures may be reduced depending on the amount of capital stock we possess. For a company like us, the threshold is 5%. Thus, shareholders representing 5% of our voting capital may demand the adoption of the cumulative voting procedure.

Regarding the right to appoint members of our Board of Directors and our Fiscal Council, the following should be highlighted:

- our minority preferred shareholders that together hold at least 10% of the total capital stock (excluding the shares held by our controlling shareholder) have the right to elect and remove one member to our Board of Directors at a shareholders' meeting, by a separate voting procedure;
- our minority common shareholders have the right to elect and remove one member to our Board of Directors, if a greater number of directors is not elected by such minority shareholders by means of the cumulative voting procedure;
- our employees have the right to directly elect one member to our Board of Directors by means of a separate voting procedure, pursuant to Law No. 12,353/10; and
- subject to the provisions of applicable law, the Brazilian Minister of Economy has the right to elect and remove one member of our Board of Directors.
- Brazilian Corporate Law and our Bylaws provide that, regardless of the exercise by our minority shareholders of the rights related to the cumulative voting process, the Brazilian federal government always has the right to appoint the majority members of our directors and our Fiscal Council.

## Other Shareholders' Rights

In addition to their voting rights, shareholders have the following rights:

**Preemptive rights:** Each of our shareholders has a general preemptive right to subscribe for shares or securities convertible into shares in any capital increase, in proportion to his or her shareholding. A minimum period of 30 days following the publication of notice of a capital increase is assured for the exercise of the right, and the right is transferable. Under our Bylaws and Brazilian Corporate Law, and subject to the requirement for shareholder approval of any necessary increase to our authorized share capital, our Board of Directors may decide not to extend preemptive rights to our shareholders, or to reduce the 30-day period for the exercise of preemptive rights, in each case with respect to any issuance of shares, debentures convertible into shares or warrants in the context of a public offering.

In the event of a capital increase by means of the issuance of new shares, holders of ADSs and holders of common or preferred shares would have, except under circumstances described above, preemptive rights to subscribe for any class of our newly issued shares. However, holders of ADSs may not be able to exercise the preemptive rights relating to the common and preferred shares underlying their ADSs unless a registration statement under the Securities Act is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available.

For more information, see “Risks – Risk Factors – Equity and Debt Securities Risks” in this annual report.

**Redemption and rights of withdrawal:** Brazilian Corporate Law provides that, under limited circumstances, shareholders have the right to withdraw their equity interest from a company and to receive payment for the portion of shareholder’s equity attributable to their equity interest.

This right of withdrawal may be exercised by the holders of the adversely affected common or preferred shares, provided that certain conditions set forth in Brazilian Corporate Law are met, in the event that we decide to:

- increase the existing classes of preferred shares, without preserving the proportions to any other class of preferred shares;
- change the preferences, privileges, redemption or amortization conditions of any class of preferred shares or to create a new class of preferred shares entitled to more favorable conditions than the existing classes;
- merge into another company or to consolidate with another company;
- participate in a centralized group of companies as defined under Brazilian Corporate Law;
- reduce the mandatory distribution of dividends;
- change our corporate purposes;
- spin-off a portion of us;
- transfer all of our shares to another company or to receive shares of another company in order to make us, whose shares are transferred a wholly-owned subsidiary, known in Brazil as incorporação de ações; or
- acquire control of another company at a price that exceeds the limits set forth in Brazilian Corporate Law.

This right of withdrawal may also be exercised in the event that the entity resulting from a merger, consolidation or spin-off of a listed company and us do not negotiate new shares in the secondary market, within 120 days from the date of the shareholders’ meeting approving the transaction, in accordance with the applicable SEC regulations.

Considering that our Bylaws do not provide for rules to determine any value for redemption, under Brazilian Corporate Law, any redemption of shares arising out of the exercise of such withdrawal rights would be made based on the book value per share, determined on the basis of the last balance sheet approved by our shareholders. However, if a shareholders' meeting giving rise to redemption rights occurred more than 60 days after the date of the last approved balance sheet, a shareholder would be entitled to demand that his or her shares be valued on the basis of a new balance sheet dated within 60 days of such shareholders' meeting. In this case, we would immediately pay 80% of the amount of reimbursement calculated based on the last balance sheet and, after the special balance sheet has been drawn up, we would pay the balance within 120 days from the date of the shareholders' meeting resolution. The right of withdrawal lapses 30 days after publication of the minutes of the shareholders' meeting that approved the matters described above. We would be entitled to reconsider any action giving rise to withdrawal rights within ten days following the publication of the minutes of the meeting ratifying the decision if the payment of the price of reimbursement of the shares to the dissenting shareholders would jeopardize our financial stability.

**Liquidation:** In the event of a liquidation, holders of preferred shares are entitled to receive, prior to any distribution to shareholders, payment for the portion of shareholder's equity attributable to their equity interest.

**Conversion rights:** Our common shares are not convertible into preferred shares, nor are preferred shares convertible into common shares.

**Liability of our shareholders for further capital calls:** Neither Brazilian Corporate Law nor our Bylaws provide liability for our shareholders for further capital calls. Our shareholders' liability for capital stock is limited to the payment of the issuance price of the shares subscribed or acquired.

**Rights not subject to waiver:** According to Brazilian Corporate Law, neither a company's Bylaws nor decisions taken at a shareholders' meeting may deprive a shareholder of some specific rights, such as the right to:

- participate in the distribution of profits;
- participate in any remaining residual assets in the event of our liquidation;
- supervise the management of the corporate business as specified in Brazilian Corporate Law;
- exercise preemptive rights in the event of a subscription of shares, debentures convertible into shares or subscription warrants (other than with respect to a public offering of such securities, as may be set out in the Bylaws); and
- withdraw from our company in the cases specified in Brazilian Corporate Law.

# Dividends

## Payment of Dividends and Interest on Capital

Our dividend payments are subject to the provisions of Brazilian Corporate Law and applicable local laws and regulations, our Bylaws and our dividend distribution policy.

Our distributions can include dividends and/or interest on capital (*juros sobre capital próprio*). The payment of interest on capital to our shareholders is subject to withholding income tax, pursuant to the Brazilian tax laws, which is not levied upon payments of dividends. The holders of ADSs are also subject to withholding income tax, unless provided otherwise by their applicable law.

Payments for each fiscal year must be made following shareholders' approval at the annual general meeting of shareholders. The profits are distributed in proportion to the number of shares owned by each shareholder on the applicable record date. Our preferred shares have preference in the distribution of dividends and interest on capital. Thus, the payment of dividends to holders of common shares is subject to the right to dividend distributions held by the holders of preferred shares.

In 2020, we revised our Dividend Policy in order to enable Management to propose the payment of dividends compatible with our cash generation, even in years with accounting losses. In the event that our Gross Debt, including lease commitments, is above US\$60 billion, our Management can recommend the distribution of dividends, with accounting losses, when there is a reduction in Net Debt in the last 12-month period, if the management believes that it will not negatively affect our financial sustainability. The distribution proposal should be limited to the value of the Net Debt reduction.

We may also, in exceptional cases, propose the payment of extraordinary dividends, exceeding the minimum legal mandatory dividend or the annual amount calculated from the formula:

$$\text{Remuneration} = 60\% \times (\text{Operating Cash Flow}^1 - \text{CAPEX Investments}^2)$$

In all cases, the dividends distribution must comply with the provisions of the applicable legislation, including article 201 of the Brazilian Corporate Law.

<sup>1</sup> Operating Cash Flow means net cash generated by operating activities.

<sup>2</sup> CAPEX Investments mean acquisitions of assets, fixed assets and intangibles, as well as investments in investees, provided that the following are not considered as CAPEX Investments: (i) proceeds from the sale of assets; (ii) payments in the participation of bidding rounds for oil and natural gas upstream; and (iii) payments relating to the acquisition of companies or equity interests.

Our Dividend Policy includes the following types of dividend distribution:

- **Annual:** The decision to distribute dividends and other earnings depends on a number of factors, including our financial results and condition, cash needs, future prospects of current and potential markets in which we operate, existing investment opportunities, maintenance and expansion of our production capacity. The payment of annual dividends is based on our year-end audited consolidated financial statements.
- **Intermediate Dividends (dividendos intercalares):** Pursuant to Brazilian Corporate Law, we may distribute intermediate dividends, which shall be calculated based on our semi-annual or quarterly balance sheet prepared during the current fiscal year and not yet approved by our shareholders, i.e. before we have determined our full-year earnings.
- **Interim Dividends (dividendos intermediários):** Our Board of Directors may also approve the payment of interim dividends, which shall be calculated based on our profit reserve account existing in the last balance sheet approved by our shareholders' meeting (i.e. these dividends are paid based on either an annual or semi-annual balance sheet already approved by our shareholders). The amount of interim dividends distributed cannot exceed the amount of our capital reserves.

Pursuant to our Bylaws, intermediate and interim dividends and interest on capital shall be allocated as minimum mandatory dividend as set forth by the Brazilian law, including for the purpose of paying the minimum priority dividends of preferred shares.

Law No. 9,249/95, as amended, provides for distribution of interest on capital to shareholders as an alternative form of distribution. Such interest is limited to the daily pro rata variation of the TJLP interest rate. The effective payment or credit of interest on capital depends on the existence of profits, calculated before deducting interest, or accumulated profits and profit reserves, in an amount equal to or greater than twice the amount of the interest to be paid or credited.

We may treat these payments of interest on capital as a deductible expense for calculating real profit, but the deduction cannot exceed the greater of:

- 50% of net income before taking into account such distribution, in case these are considered expenses, based on the calculated profit after taking into account any deductions for social contributions on net income and before deducting income tax for the period in respect of which the payment is made; or
- 50% of retained earnings and profit reserves.

With respect to the payment of dividends, our shareholder must also consider the following:

- **Taxation:** Any payment of interest on capital to ADS holders or shareholders, whether or not they are Brazilian residents, is subject to Brazilian withholding taxes at the rate of 15% or 25%, subject to possible reduction by an applicable tax treaty. The 25% rate applies only if the beneficiary is resident in a tax haven. The amount paid to shareholders as interest on capital, net of any withholding tax, may be included as part of any mandatory distribution of dividends. Under Brazilian Corporate Law, we are required to distribute to shareholders an amount sufficient to ensure that the net amount received, after payment by us of applicable Brazilian withholding taxes in respect of the distribution of interest on capital, is at least equal to the minimum mandatory dividend as set forth by the Brazilian law.

For more information on Brazilian taxation of ADSs and our shares, see “Legal and Tax – Taxation Relating to the ADSs and our Common and Preferred Shares” in this annual report.

- **Date of payment:** Under Brazilian Corporate Law and our Bylaws, dividends are generally required to be paid within 60 days following the date they are declared, unless a shareholders’ resolution sets forth for another date of payment, which, in any case, must occur prior to the end of the fiscal year in which the dividend was declared.
- **Adjustments:** Our board of directors may approve the payment of anticipated dividends or interest on capital to our shareholders which amount is subject to financial charges at the SELIC rate from the end of each fiscal year through the date we actually pay such dividends or interest on capital.
- **Unclaimed dividends:** Shareholders have a three-year period from the dividend payment date to claim dividends or interest on capital payments with respect to their shares, after which the amount of the unclaimed dividends reverts to us.

Our total distributions to shareholders for 2020 amounts to US\$1,977 million and will be voted at our shareholder’s annual general meeting to occur in 2021. For further information, see Note 36.5 to our audited consolidated financial statements.



### Mandatory distribution

Pursuant to Brazilian Corporate Law and our Bylaws, we must comply with two minimum mandatory distributions of dividends, both of which are provided in our Dividend Policy.

- We must pay at least 25% of our adjusted net income, after deducting allocations to the legal reserve and further allocations eventually required by Brazilian Corporate Law; and
- Holders of our preferred shares have priority to receive the mandatory dividend amount, as well as to receive a payment in the event of reimbursement of capital. They are also entitled to minimum annual non-cumulative preferential dividends in case we declare dividends equal to the higher of (a) 5% of their pro rata share of our paid-in capital, or (b) 3% of the book value of their preferred shares.

To the extent that we declare dividends on our common shares in any particular year in an amount that exceeds the minimum preferential dividends, holders of preferred shares are entitled to an additional dividend amount per share in the same amount per share paid to holders of common shares. Holders

of preferred shares also participate equally with common shareholders in share capital increases derived from the incorporation of reserves and profits.

Brazilian Corporate Law, however, permits a publicly held company such as ours to suspend the minimum mandatory distribution of dividends in case our Board of Directors and our Fiscal Council report to the annual general shareholders' meeting that the distribution would not be advisable due to our financial condition. In this case, our Board of Directors must file with the CVM an explanation for suspending the dividend distribution. Profits not distributed due to such suspension must be allocated to a special reserve and, if not absorbed by subsequent losses, must be distributed as soon as our financial condition allows such payments.

## Allocation of net income

At each annual general shareholders' meeting, our Board of Directors and Board of Executive Officers are required to recommend how to allocate net income for the preceding fiscal year. Under Brazilian Corporate Law, net income is obtained after deducting statutory holdings of the employees, managers and beneficiary parties.

In accordance with Brazilian Corporate Law, an amount equal to our net profits, as further reduced by amounts allocated to the legal reserve, to the fiscal incentive investment reserve, to the contingency reserve or to the unrealized income reserve established by us in compliance with applicable law (discussed below) and increased by reversals of reserves constituted in prior years, is available for distribution to shareholders in any given year. After the distribution of preferred dividends, a percentage of net income may be allocated to a contingency reserve for anticipated losses that are deemed probable for future years. Any amount so allocated in a prior year must be either (i) reversed in the fiscal year in which the reasons justifying the reserve cease to exist, or (ii) written off in the event that the anticipated loss occurs.

A portion of the net income from donations or government grants for investments may also be allocated to the creation of a tax incentive reserve.

If the mandatory distribution amount, determined without deducting the amount of unrealized profits from its calculation basis, exceeds the sum of realized net income in a given year, this excess may be allocated to an unrealized revenue reserve. Brazilian Corporate Law defines realized net income as the amount of net income that exceeds the sum of the net positive result of equity adjustments and profits or revenues from operations whose financial results take place after the end of the next succeeding fiscal year. As long as we are able to make the minimum mandatory distribution described below, we must allocate an amount equivalent to 0.5% of subscribed and fully paid-in capital at year-end to a statutory reserve. The reserve is used to fund the costs of research and technological development programs. The accumulated balance of this reserve cannot exceed 5% of the subscribed and fully paid-in capital stock.

Brazilian Corporate Law also provides for the retention of profits, which cannot be approved in the event there is mandatory dividend distribution and must be in accordance with the terms of our capital budget previously approved by the shareholders' meeting.

A portion of our net income that exceeds the minimum mandatory distribution may be allocated to fund working capital needs and investment projects, as long as such allocation is based on a capital budget previously approved by our shareholders. Capital budgets for more than one year must be reviewed at each annual shareholder meeting.

The creation of statutory reserves and the retention of profits cannot be approved to the detriment of the mandatory dividend.

# Additional information for non-Brazilian shareholders

Foreign investors may trade their shares directly on the B3 (non-Brazilian holders) or through ADSs on the NYSE. There are no restrictions on ownership of our common or preferred shares in Brazil by individuals or legal entities domiciled outside Brazil and all of them are entitled to the rights and preferences of our common or preferred shares, as the case may be.

The ability to convert dividend payments and proceeds from the sale of common or preferred shares or preemptive rights into foreign currency and to remit such amounts outside Brazil is subject to restrictions under foreign investment legislation (Brazilian foreign exchange controls). However, if foreign investors are registered with the CVM, in accordance with CMN Resolution No. 4,373, they may use the dividend payments and proceeds from the sale of shares to buy and sell securities directly on the B3, which generally requires, among other steps, the registration of the relevant investment with the Central Bank of Brazil. Nonetheless, any non-Brazilian holder who registers with the CVM in accordance with CMN Resolution No. 4,373 may buy and sell securities directly on the B3. Such non-Brazilian holders must appoint a local representative in Brazil who will be required, among other duties, to register and keep updated with the Central Bank of Brazil the record of all transactions of such investors on the B3.

The right to convert dividend payments and proceeds from the sale of shares into foreign currency and to remit such amounts outside Brazil may also be subject to restrictions under foreign investment legislation. If any restrictions are imposed on the remittance of foreign capital abroad, they could hinder or prevent the *Central Depositária*, as custodian for the common and preferred shares represented by the ADSs, or registered holders who have exchanged ADSs for common or preferred shares, from converting dividends, distributions or the proceeds from any sale of such common or preferred shares, as the case may be, into U.S. dollars and remitting the U.S. dollars abroad.

## Non-Brazilian Holders on B3

Under CMN Resolution No. 4,373, foreign investors may invest in almost all financial assets and engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are fulfilled. Therefore, a foreign investor must:

- appoint at least one representative in Brazil, with powers to perform actions relating to the investor's investment;
- register as a foreign investor with the CVM;
- appoint at least one authorized custodian in Brazil for the investor's investments;

- register all portfolio investments of the foreign investor in Brazil, through the investor's representative, with the Central Bank of Brazil; and
- comply with other requirements provided for under CVM Resolution No. 13/20.

After the fulfillment of these requirements, the foreign investor will be able to trade in the Brazilian financial and capital markets.

Securities and other financial assets held by investors under CMN Resolution No. 4,373 must be registered or maintained in deposit accounts or under the custody of an entity duly licensed by the Central Bank of Brazil or the CVM. In addition, any transfer of securities held under CMN Resolution No. 4,373 and CVM Resolution No. 13/20 must be carried out in the stock exchanges or through organized over-the-counter markets licensed by the CVM, except for transfers resulting from private transactions.

## ADS Holders

CMN Resolution No. 4,373 allows Brazilian companies to issue depositary receipts in foreign exchange markets. We currently have an ADR program for our common and preferred shares duly registered with the CVM and the Central Bank of Brazil. The proceeds from the sale of ADSs by holders outside Brazil are free of Brazilian foreign exchange controls.

JPMorgan is the depositary for both of our common and preferred ADSs since January 2, 2020. The Depositary will register and deliver the ADSs, each of which currently represents (i) two shares (or a right to receive two shares) deposited with an agent of the Depositary acting as custodian, and (ii) any other securities, cash or other property which may be held by the Depositary. The Depositary's corporate trust office at which the ADSs will be administered is located at 383 Madison Avenue, Floor 11, New York, New York 10179, United States.

The Depositary has obtained from the Central Bank of Brazil an electronic certificate of registration with respect to our existing ADR program. Pursuant to the registration, the custodian and the Depositary will be able to convert dividends and other distributions with respect to the relevant shares represented by ADSs into foreign currency and to remit the proceeds outside Brazil.

In the event that an ADS holder exchanges ADSs for the underlying common or preferred shares, the holder will be required to obtain registration as a foreign investor in Brazil pursuant to CMN Resolution No. 4,373 by appointing a local representative and obtaining a certificate of registration from the Central Bank of Brazil. Failure to take these measures may subject the holder to the inability of converting the proceeds from the disposition of, or distributions with respect to, the relevant shares, into foreign currency and to remit proceeds outside of Brazil. Additionally, the holder may be subjected to a less favorable Brazilian tax treatment than a holder of ADSs. If the foreign investor resides in a tax haven jurisdiction, the investor will also be subject to less favorable tax treatment.

For more information, see “Risks – Risk Factors – Equity and Debt Securities Risks” and “Legal and Tax – Tax – Taxation Relating to Our ADSs and Common and Preferred Shares” in this annual report.

### Fees Payable by ADS holders

ADS holders are required to pay various fees to the Depositary, including: (i) an annual fee of US\$0.05 (or less) per ADS for administering the ADR program, and (ii) amounts in respect of expenses incurred by the Depositary or its agents on behalf of ADS holders, including expenses arising from compliance with applicable law, taxes or other governmental charges, facsimile transmission, or conversion of foreign currency into U.S. dollars. In both cases, the Depositary may decide in its sole discretion to seek payment by directly billing investors or by deducting the applicable amount from cash distributions. ADS holders may also be required to pay additional fees for certain services provided by the Depositary, as set forth in the table below.

Depositary Services	Fees Payable by ADS Holders
Issuance and delivery of ADSs, including issuances resulting from a distribution of shares or rights or other property	US\$5.00 (or less) per 100 ADSs (or portion thereof)
Distribution of dividends	US\$0.03 (or less) per ADS per year
Cancellation of ADSs for the purpose of withdrawal	US\$5.00 (or less) per 100 ADSs (or portion thereof)

### Fees Payable by the Depositary

The Depositary reimburses us for certain expenses we incur in connection with the administration and maintenance of the ADR program. These reimbursable expenses comprise, among others, investor relations expenses, listing fees and legal fees.



### Purchases of equity securities by the issuer and affiliated purchasers

During the fiscal year ended December 31, 2020, neither any “affiliated purchaser,” as defined in Rule 10b-18(a)(3) under the Exchange Act, nor we, have purchased any of our equity securities.



## **Legal and Tax**

# Regulation

## Business Regulation

### Exploration & Production

Under Brazilian law, the federal government owns all crude oil and natural gas subsoil accumulations in Brazil, and any state- or privately-owned company can carry out the exploration and production of such oil and natural gas accumulations in the country. There are three different types of E&P contracts: (i) Concession Regime; (ii) Production Sharing; and (iii) Transfer of Rights.

#### Concession Regime

Until 1997, we were the Brazilian federal government's exclusive agent to carry out exploration and production of oil and gas in Brazil.

In 1997, the Brazilian federal government established a concession-based regulatory framework and created an independent regulatory agency to regulate the oil, natural gas and renewable fuel industry in Brazil, namely the ANP. This framework and the ANP created a competitive environment in the oil and gas sector.

The concession-based regulatory framework granted us the right to explore crude oil reserves in each of our already existing producing fields under concession contracts for an initial term of 27 years from the date when they were declared commercially profitable. These are known as the "Round Zero" concession agreements. This initial 27-year period for production can be extended at the request of the concessionaire, subject to approval from the ANP.

Starting in 1999, all areas that were not already subject to concessions became available for public bidding conducted by the ANP. We participated in these biddings both independently or through partnerships with private companies (as operator or as non-operator, in a case-by-case analysis).

According to Law No. 9,478/1997, and as per our concession agreements for exploration and production activities, we are entitled to the oil and gas exploited from the concession areas and we are required to distribute to the Brazilian federal government a portion of the corresponding proceeds.

For information related to Taxation under Concession Regime for Oil and Gas, see item "Legal and Tax – Tax" in this annual report.

### **Production-Sharing Contract Regime for Unlicensed Pre-Salt and Potentially Strategic Areas**

Discoveries of large oil and natural gas reserves in the pre-salt areas of the Campos and Santos Basins prompted a change in the legislation regarding oil and gas exploration and production activities. In 2010, laws were enacted to regulate contracts under a production-sharing regime in the pre-salt area, as defined under Law No. 12,351/2010 and in potentially strategic areas. The enacted legislation did not impact the concession contracts.

We are no longer required to be the exclusive operator of the pre-salt areas, but prior to any bid round, the Brazilian federal government must offer us, the right to express our interest to exercise the preemption right to operate the blocks under production-sharing regime with minimum 30% of participating interest. Should there be no proposal for the areas to which we have expressed such interest that area will not be awarded and therefore, we have no remaining obligations. The preemption right only becomes effective in (i) cases of winning proposals above the minimum profit oil, should we decide to be part of such consortium and have previously expressed interest and (ii) cases in which the winning proposal is in the minimum profit oil, then we are required to be the operator, with minimum 30% of participating interest, as applicable according to the relevant Governmental Resolution. Regardless of whether we exercise our preemption right, we will also be able to participate, at our discretion, in the bidding process to increase our interest in any of the pre-salt areas.

The winning bidder will be the company that offers to the Brazilian federal government the highest percentage of “profit oil,” which is the gross revenue of the production of a certain field after deduction of royalties and “cost oil,” which is the cost associated with oil production. The royalty rate is 15% applicable to the gross production of oil and natural gas and there is no other government fee payable to the Brazilian federal government.

The production-sharing contracts are executed by and between the private companies that are winning bidders, the state-owned non-operating company PPSA, which represents the interests of the Brazilian federal government in the production-sharing contracts and manages the Brazilian federal government’s share of the profit oil, and the ANP. The PPSA participates in operational committees, with a casting vote and veto powers and manages and controls the relevant costs, all of it according to each specific production-sharing contract.

### **Transfer of Rights (*Cessão Onerosa*)**

In 2010, we entered into an agreement with the Brazilian federal government, under which the government assigned to us the right to conduct activities for the exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. The initial contract price for our rights under the Transfer of Rights Agreement was US\$14,395 million, as of December 31, 2020, which was paid in full in 2010. See “Material Contracts” in this annual report.

Both Law No. 12,276/2010 (the “Transfer of Rights Law”) and the Transfer of Rights Agreement provide for a review procedure. The main purpose of the review procedure is to verify whether the price paid to the Brazilian federal government by us in 2010 was appropriate in relation to the price for granting us the rights to explore and produce five billion barrels of oil equivalent in certain pre-salt areas.

According to the Transfer of Rights Agreement, the review must be based on technical reports prepared by independent certifying entities to be contracted by the ANP and the assignee, which shall consider the best practices of the oil industry, including the following items: (a) information contained in the final report of the mandatory exploration program (as such term is defined in the Transfer of Rights Agreement); (b) the market prices of oil and natural gas; and (c) specification of the product being produced. In addition, as provided in the Transfer of Rights Agreement, the review must follow the assumptions set forth in such agreement.

An internal committee to negotiate the revision of the Transfer of Rights Agreement with representatives of the Brazilian federal government (i.e. representatives of the MME, the Ministry of Finance, and the ANP) was created. The negotiations resulted in a revision of the Transfer of Rights Agreement that was submitted to the TCU for analysis, by recommendation of the MME.

In 2019, the amendment to the Transfer of Rights Agreement was approved by us, the TCU and the National Council for Energy Policy.

The amendment consolidates one of several scenarios discussed among the Brazilian federal government and our commissions and resulted in a credit of US\$9,058 billion in our favor, that was fully paid in December 2019. Additionally, the amendment establishes new percentages for local content: 25% for well construction; 40% for production collection and disposal system; and 25% for stationary production unit. For information related to the new taxation model for the oil and gas industry (“REPETRO”) see “Legal and Tax – Tax” in this annual report.

## Refining, Transportation and Marketing

Regarding oil refining, the ANP requires specific authorization for the construction and operation of each of the process units, product treatment units and ancillary units of an oil refinery. The byproducts commercialization is subject to compliance with the specifications established by the ANP for each product (e.g. gasoline, diesel, jet fuel, liquefied petroleum gas).

The ANP requires information on import, export, production, processing, handling, transportation and transfer, storage and distribution of oil, oil products, natural gas products and shale products activities on a monthly basis.

Since 2013, the ANP requires oil product producers (refineries and other agents) and fuel distributors to ensure minimum inventories of gasoline and diesel. In 2015, the ANP established the same obligation for producers of LPG and jet fuel.

The ANP also requires that refineries and importers of oil byproducts publicly release their price lists electronically (standard prices) as well as the prices for the previous 12 months, with a description of the specific commercial terms for: (i) regular and premium gasoline; (ii) diesel oil and marine diesel; (iii) jet fuel; (iv) LPG; (v) fuel oil; and (vi) asphalt.

Failure to comply with the ANP rules can lead to a range of fines and penalties, including the revocation of the authorization.

In December 2016, the Brazilian federal government launched the “RenovaBio” program to stimulate the production of biofuels in the local market, namely ethanol, biodiesel, biogas and biojet fuel. In June 2019, the CNPE fixed the mandatory annual reduction of carbon emission targets and the ANP established (i) the individualization of the annual mandatory greenhouse gas emission reduction targets for the commercialization of fuels (Resolution No. 791/2019) and (ii) the procedures for the primary emission of carbon emission reduction credits (Resolution No. 802/2019).

In June 2017, the CNPE established strategic guidelines for the development of the local market for fuels, other oil byproducts and biofuels. As part of the guidelines, the MME launched the “Abastece Brasil” program on April 24, 2019, which aims to develop Brazil’s local fuel market, promote competition in the sector, diversification of players, new investments in refining and logistics, and combating tax evasion and adulteration of fuels.

In December 2020, the CNPE established guidelines (Resolution No. 14/2020) to substitute the relevant bidding procedure for biodiesel acquisition and designated ANP to design the new marketing model that must be in force by January 1, 2022).

Our oil and natural gas refining area is also subject to the preventive and stringent control of CADE.

In June 2019, we signed a commitment with CADE (termo de cessação de conduta) that consolidates our understanding on the divestment of refining assets in Brazil.

For more information on our agreement with CADE regarding our divestments in refining assets, see “Risks – Risk Factors – Operational Risks” and “Portfolio Management” in this annual report.

## Gas and Power

### Natural Gas Law of 2009

In March 2009, the Brazilian Congress enacted Law No. 11,909, or “Gas Law”, regulating activities in the gas industry, including transport, processing, storage, liquefaction, regasification and commercialization. The Gas Law created a concession regime for the construction and operation of new pipelines to transport natural gas of general interest, while maintaining an authorization regime for pipelines subject to international agreements. According to the Gas Law, after a certain exclusivity period, operators will be required to grant access to transport pipelines and maritime terminals, except for LNG terminals, to third parties in order to maximize utilization of capacity.

The Gas Law authorized the ANP to regulate prices for the use of gas transport pipelines subject to the new concession regime and to approve prices submitted by carriers, according to previously established criteria, for the use of new gas transport pipelines subject to the authorization regime.

Authorizations previously issued by the ANP for natural gas transport will remain valid for 30 years from the date of publication of the Gas Law, and initial carriers were granted exclusivity in these pipelines for 10 years. All pipelines currently operated in Brazil are subject to an authorization regime. The ANP will issue regulations governing third-party access and carrier compensation if no agreement is reached between the parties.

The Gas Law also authorized certain consumers, who can purchase natural gas on the open market or obtain their own supplies of natural gas, to construct facilities and pipelines for their own use in the event local gas distributors controlled by the states, which have monopoly over local gas distribution, do not meet their distribution needs. These consumers are required to delegate the operation and maintenance of the facilities and pipelines to local gas distributors, but they are not required to sign gas supply agreements with the local gas distributors.

In December 2010, Decree No. 7,382 was enacted in order to regulate Chapters I to VI and VIII of the Gas Law as it relates to activities in the gas industry, including transportation and commercialization. Since the publication of this decree, a number of administrative regulations were enacted by the ANP and the MME in order to regulate various issues related to the Gas Law and Decree No. 7,382 that needed to be further clarified. Among those is ANP Resolution No. 51/2013, which prevents a carrier from holding any relevant equity interest in companies holding concessions for gas transport pipelines. Resolution No. 51/2013 applies only to the concessions granted after its publication, not affecting, therefore, the transportation of our natural gas production through pipelines operated by TBG and subject to the previous authorization regime.

Another important resolution is ANP Resolution No. 52/2011, which (i) establishes that ANP is responsible for authorizing the activity of commercialization of natural gas, within the competence of the Brazilian federal government; (ii) regulates the registration of the gas seller agent; and (iii) regulates the registration of gas sales and purchase agreements. This resolution was modified in July 2019 by Resolution No. 794/2019, which requires the publication, by the ANP, of all natural gas sales and purchase agreements signed with local gas distributors to attend captive markets.

In June 2016, the MME created the program Gas to Grow, or Gás para Crescer, which aims to promote a competitive market environment to achieve the effective development of gas trading in Brazil, enabling the entry of new agents into the gas market.

In December 2018, Decree No. 9,616 amended Decree No. 7,382/2010 to allow the change of gas transmission system from capacity hired under the point-to-point system on long-term contracts to an entry-exit system. More recently, in June 2019, the CNPE established guidelines for promoting competition in the natural gas market, and in July 2019, the New Gas Market program, or Novo Mercado de Gás, was created and Decree No. 9,934 was signed. This decree establishes a committee that monitors the implementation of the actions required for the entry of new agents into the natural gas market.

Also, in July 2019, we signed an agreement with CADE (termo de compromisso de cessação), which consolidates understandings between the parties on the promotion of competition in the natural gas industry in Brazil.

For more information on our agreement with CADE regarding our divestments in the natural gas industry, see “Risks – Risk Factors – Operational Risks” and “Our Business – Gas and Power – Marketing” in this annual report.

In 2020, considering the obligations established in the agreement mentioned above, we concluded the sale of our shareholdings in the transportation company, TAG, and initiated the sale processes of other transportation companies, NTS and TBG, and of Gaspetro, which hold stakes of several gas distribution companies in Brazil. We also negotiated some contracts for third party access to our processing plants and started the competitive process for the lease of the Regasification Terminal in the state of Bahia, among other actions in compliance with the agreement signed with CADE.

In the context of the ongoing market opening process, in 2020 the ANP also initiated public consultations about important changes in the gas regulation, including discussions on the creation of independence criteria for gas transportation companies, on the conceptual model for the gas market activities of federal competence and on the exercise of production of oil products and natural gas activities. The ANP also intends to start the process of modifying several resolutions regarding gas market activities, according to its regulatory agenda.

There is also a pending bill that intends to modify the Gas Law (Bill No. 6,407/2013), which includes proposals that have been discussed in the context of the Gas to Grow and New Gas Market programs. If the bill is approved, it will result in important changes in the natural gas market, including the exploitation regime of natural gas transport activities.

For more information on our agreement with CADE, see “Risks – Risk Factors – Operational Risks”, “Portfolio Management” and “Our Business – Gas and Power – Marketing” in this annual report.

## Price Regulation

Until 1997, the Brazilian federal government had the power to regulate all aspects of the pricing of crude oil, oil products, ethanol, natural gas, electric power and other energy sources. In 2002, the Brazilian federal government eliminated price controls for crude oil and oil products, although it retained regulation over certain existing natural gas sales agreements and electricity agreements (specifically the electric power trade contracts in the regulated market – CCEAR).

For information on our price policy, see “Our Business – Refining, Transportation and Marketing” in this annual report.

## Environmental Regulation

All phases of the crude oil and natural gas business present environmental risks and hazards. Our facilities in Brazil are subject to a wide range of federal, state and local laws, regulations and permit requirements relating to the protection of human health and the environment, and they fall under the regulatory authority of CONAMA.

Our offshore activities are subject to the administrative authority of IBAMA, which issues operating and drilling licenses. We are required to submit reports on a regular basis, including safety and pollution monitoring reports to IBAMA and third party environmental audits in order to maintain our licenses. This way, we maintain an ongoing communication channel with the environmental authorities, in order to improve issues connected with the environmental management of our exploration, production and refining processes of oil and natural gas. In 2018, we designed actions and measures, together with IBAMA, to adjust the treatment and discharge of produced water in some of our offshore platforms in order to accommodate recently issued requirements by IBAMA. All of these actions are being met by us within the schedules defined with IBAMA.

In addition, in order to help ensuring the safety of navigation, the Brazilian maritime authority also works towards the prevention of environmental pollution, with random or periodic surveys of offshore units.

Most of the onshore environmental, health and safety conditions are controlled either at the federal or the state level depending on where our facilities are located and the type of activity under development. However, it is also possible for these conditions to be controlled on a local basis whenever the activities generate a local impact or are established in a county conservation unit. Under Brazilian law, there is strict and joint liability for environmental damage, mechanisms for enforcement of environmental standards and licensing requirements for polluting activities.

Individuals or entities whose conduct or activities cause harm to the environment are subject to criminal, civil and administrative sanctions. Government environmental protection agencies may also impose administrative sanctions for noncompliance with environmental laws and regulations, including:

- fines;
- partial or total suspension of activities;

- requirements to fund reclamation and environmental projects;
- forfeiture or restriction of tax incentives or benefits;
- closing of establishments or operations; and
- forfeiture or suspension of participation in credit lines with official credit establishments.

For more information, see Notes 12 and 31 to our audited consolidated financial statements.

## Government Regulation

As a federal state-owned company, we are subject to certain rules that limit our investments, and we are required to submit our annual capital expenditures budget (Orçamento Anual de Investimentos, or OAI) to the ME and the MME. Following the review by these governmental authorities, the Brazilian Congress must approve our budget. Thus, there may be a reduction or change in our planned investments. As a result, we may not be able to implement all of our planned investments, including those related to the expansion and development of our oil and natural gas fields, which may adversely affect our results of operation and financial condition.

All medium and long-term debt incurred by us or our subsidiaries requires the approval of the Finance Executive Manager jointly with another Executive Manager within the parameters established by our Board of Executive Offices and the Board of Directors.

The exceptions are the issuance of public debt in the capital markets and collateralized debt obligations, which require the approval of our Board of Executive Officers, within the parameters established by our Board of Directors, and the issuance of debentures, which requires the approval of our Board of Directors.

In addition, Law No. 13,303/16 requires us to define in our Bylaws the public interest we pursue and which publicly-oriented actions we are allowed to take in the pursuit of such public interest. In order to comply with Law No. 13,303/16, we amended our Bylaws to include the definition of public interest and to state that the Brazilian federal government may orient our activities to pursue the public interest under certain circumstances, which distinguishes us from any other private company operating in the oil and gas market.

More specifically, the Brazilian federal government may guide us to take publicly-oriented obligations or responsibilities, including executing investment projects and undertaking certain operating costs, when two conditions are met: (i) the undertaking of obligations or responsibilities must be defined by law or regulation and provided for in a contract or agreement entered into with any public entity with powers to negotiate such contract or agreement; and (ii) the investment projects must have their cost and revenues broken down and disclosed in a transparent manner.

Our financial committee and our minority committee, exercising their advisory role to our Board of Directors, are in charge of evaluating whether the obligations and responsibilities undertaken by us, in connection with the pursuit of the public interest, are different from those of any other private company operating in the oil and gas market. The evaluation by our committees is based on certain technical and economic aspects of the planned investment projects and on the analysis of certain operating costs previously adopted by our management.

# Material Contracts

## Production-Sharing Agreements

*(Contratos de Partilha de Produção)*

### First Production Sharing Agreement – 1<sup>st</sup> Production Sharing Bidding Round

In 2013, a consortium formed by us (with a 40% interest), Shell (with a 20% interest), Total S.A (with a 20% interest), CNODC Brasil Petróleo e Gás Ltda. (with a 10% interest) and CNOOC Petroleum Brasil Ltda. (with a 10% interest) (the “Libra Consortium”), entered into a production sharing agreement with the Brazilian federal government, which holds 41.65% of the Libra Consortium’s profit oil, the ANP, as regulator and supervisor, and PPSA, as manager (the “First Production Sharing Agreement”). Under the First Production Sharing Agreement, the Libra Consortium was awarded the rights and obligations to operate and explore a strategic pre-salt area known as Libra block, located in the ultra-deepwaters of the Santos Basin. For further information on the Production Sharing Agreement, see Exhibit 2.22 to this annual report.

### Second and Third Production Sharing Agreements – 2<sup>nd</sup> and 3<sup>rd</sup> Production Sharing Bidding Rounds

In 2017, we acquired, in partnership with other international oil companies, three offshore blocks in the 2<sup>nd</sup> and 3<sup>rd</sup> bidding rounds under the production sharing system held by the ANP. We are the operator of these blocks (“Second and Third Production Sharing Agreements”). In January 2018, together with our partners, the ANP, PPSA and the Brazilian federal government, we signed the Second and Third Production Sharing Agreements for exploration and production of oil and natural gas.

Under the production sharing system, the consortium submits to the government a percentage of the so-called “surplus in oil profit for the Brazilian federal government,” which is applied to revenue discounted of the production costs and royalties. The only criteria adopted by the ANP to define the winning bidder was the amount of profit oil to the Brazilian federal government, since the bidding rules provided for the fixed value of the signing bonus, the minimum exploratory program and the local content commitments.

The following table summarizes the blocks we acquired, in partnership, in the 2<sup>nd</sup> and 3<sup>rd</sup> bidding rounds as part of the production sharing system:

Area	Consortium composition	Petrobras Bonus (R\$ million)	Surplus in profit oil (%)
Entorno de Sapinhoá	Petrobras (45%)	90	80.00
	Shell (30%)		
	Repsol Sinopec (25%)		
Peroba	Petrobras (40%)	800	76.96
	BP (40%)		
	CNODC (20%)		
Alto de Cabo Frio Central	Petrobras (50%)	250	75.86
	BP (50%)		

### Fourth and Fifth Production Sharing Agreements – 4<sup>th</sup> and 5<sup>th</sup> Production Sharing Bidding Rounds

On June 7, 2018, we acquired, together with other international companies, three offshore blocks: (i) Dois Irmãos, (ii) Três Marias and (iii) Uirapuru (“Fourth Production Sharing Agreements”) and, together with the First Production Sharing Agreement and the Second and Third Production Sharing Agreements, the “Production Sharing Agreements”). We will be the operator of these three additional blocks under the production sharing regime. According to the regime, the consortium submits to the Brazilian federal government a percentage of the “surplus in oil profit for the Brazilian federal government.” Again, the only criteria adopted by the ANP to define the winning bidder was the amount of oil profit to the Brazilian federal government.

The bidding rules established the fixed value of the signing bonus, the minimum exploratory program, and the local content commitments.

On September 28, 2018, we acquired the block Sudoeste de Tartaruga Verde under the production sharing regime and, as a result, we will be the operator of the corresponding agreement.

### Sixth and Transfer of Rights Surplus Production Sharing Agreements – 6<sup>th</sup> and ToR Surplus Production Sharing Bidding Rounds

On November 6, 2019, we acquired, together with other international companies, the Buzios block, and with 100% of participation, the Itapu block.

On November 7, 2019, we acquired, together with other international company, the Aram block, and we will be the operator of such block.

The resulting three production-sharing agreements were all signed on March 30, 2020. We will be the operator of these blocks under the production-sharing regime. According to the relevant production-sharing agreements, the appointed operator, on behalf of the parties, offers to the Brazilian federal government a percentage of the “surplus in oil profit for the Brazilian federal government.” The only criteria adopted by the ANP to define the winning bidder was the amount of oil profit to the Brazilian federal government too, since the bidding rules provided for the fixed value of the signing bonus, the minimum exploratory program and the local content commitments.

**Basic Terms:**

Operating Committee. The Production Sharing Agreement Consortia are managed by an operating committee in which we, our partners and PPSA all participate. PPSA represents the interests of the Brazilian federal government and although it will not invest in the blocks, PPSA holds 50% of the operating committee voting rights and also has a casting vote and veto powers, as defined in the Production Sharing Agreements.

Risks, Costs and Compensation. All exploration, development and production activities under the Production Sharing Agreements will be conducted at the expense and risk of the members of the consortium. For commercial discoveries of crude oil and/or natural gas in the blocks, the consortium will be entitled to recover, on a monthly basis, (i) a portion of the production of oil and gas in the block corresponding to its royalty expenses and (ii) the “cost oil” corresponding to costs incurred (which is the amount associated with capital expenditures incurred and operating costs of the consortium’s exploration and production activities), subject to the conditions, proportions and terms set forth in the Production Sharing Agreements. In addition, for each commercial discovery, the consortia are entitled to receive, on a monthly basis, their share of “profit oil” as defined under the Production Sharing Agreements.

**Duration:**

The term of the Production Sharing Agreements is 35 years.

**Phases:**

Our activities under the Production Sharing Agreements are divided into two phases, as follows:

Exploration phase. This phase comprises appraisal activities for purposes of determining the commerciality of any discoveries of crude oil and natural gas. The exploration phase begins upon the execution of the Production Sharing Agreements and will end for each discovery upon the declaration of commerciality. We will have four years (which may be extended upon the ANP’s prior approval) to comply with the minimum work program and other ANP-approved activities provided for in the Production Sharing Agreements.

Production Phase. The production phase for each particular discovery begins as of the date of the declaration of commerciality by the consortia to the ANP, and lasts until the termination of the Production Sharing Agreements. It comprises a development period, during which we will carry out activities pursuant to a development plan approved by the ANP.

**Minimum Work Program:**

During the exploration phase, we are required to undertake a minimum work program, as specified in the Production Sharing Agreements. We may perform other activities outside the scope of the minimum work program, provided that such activities are approved by the ANP.

**Unitization:**

A reservoir covered by a block granted to us in the Production Sharing Agreements may extend to adjacent areas outside the block. In such case, we must notify the ANP immediately after identifying the extension and we will be prevented from performing development and production activities within such block, until we have negotiated unitization agreement with the third-party concessionaire or contractor who has rights over such adjacent area, unless otherwise authorized by the ANP. The ANP will determine the deadline for the execution of unitization agreement by the parties. If the adjacent area is not licensed (i.e., not granted for E&P activities to any other party), the Brazilian federal government, represented by PPSA or by the ANP, shall negotiate with us.

If the parties are unable to reach an agreement within a deadline established by the ANP, the ANP will determine the terms and obligations related to such unitization, on the basis of an expert report, and will also notify us and the third-party or the Brazilian federal government representative, as applicable, of such determination. Until the unitization agreement is approved by the ANP, operations for the development and production of such reservoir must remain suspended, unless otherwise authorized by the ANP. The refusal of any party to execute the unitization agreement will result in the termination of the Production Sharing Agreements and the return to the Brazilian federal government of the area subject to the unitization process.

**Environmental:**

We are required to preserve the environment and protect the ecosystem in the area subject to the Production Sharing Agreements and to avoid harming local fauna, flora and natural resources. We will be liable for damages to the environment resulting from our operations, including costs related to any remediation measures.

**Brazilian Content:**

The Production Sharing Agreements specify certain equipment, goods and services, as well as different levels of required local content, in accordance with the different phases under the Production Sharing Agreements. If we fail to comply with the Brazilian content obligations, we may be subject to fines imposed by the ANP.

The original Libra Production Sharing Agreement (“Production Sharing Bidding Round 1”) gave the Libra consortium the right to waive the local content obligations in terms of technology, price and schedule. This right was used once, and the ANP conceded waiver to the hull items and certain items of the process plants. By Resolution No 726/2018, the ANP gave the Libra consortium the possibility of changing the local content requirements to lower levels, but the possibility of waiver was excluded.

On the Production Sharing Bidding Round 2, the fields bid on had the same local content requirements of their adjacent fields contracts, according to the CNPE Resolution No 7/2017. Such resolution established new local content levels for the Production Sharing Agreements, and the Bidding Rounds 3, 4, 5 and 6 used those levels.

**Royalties and Expenses with Research and Development:**

Once we begin production in each field, members of the consortia (other than PPSA) will be required to pay monthly royalties of 15% of the oil and natural gas production, to be recovered from a portion of the production of oil and gas in the block. All members of the consortia (other than PPSA) will also be required to invest 1.0% of their annual gross revenues from crude oil and natural gas production under the Production Sharing Agreements in research and development activities related to the oil, gas and biofuel sectors.

**Miscellaneous Provisions:**

Under the Brazilian production-sharing regime, we can assign our rights and obligations inherent to our participation above 30% in the areas in which we exercised our preemptive right to be the operator.

All members of the consortia (other than PPSA) have a right of first refusal with respect to an assignment of rights and obligations by any other member of the consortium (other than PPSA).

The Production Sharing Agreements shall be terminated in the following circumstances: (i) the expiration of their terms; (ii) if the minimum work program has not been completed by the end of the exploration phase; (iii) if there has not been any commercial discovery by the end of the exploration phase; (iv) if the consortium members (other than PPSA) exercise their withdrawal rights during the exploration phase; (v) if the consortium refuses to execute a unitization agreement after the ANP makes such determination (which termination may be complete or partial) and (vi) any other basis for termination described in the Production Sharing Agreements.

Any breach of the Production Sharing Agreements or of any regulations issued by the ANP may result in sanctions and fines imposed by the ANP on the relevant party, in accordance with applicable legislation and the terms of the Production Sharing Agreements. If any breach of the Production Sharing Agreements is considered by the Brazilian federal government not to be significant, intentional, or a result of negligence, imprudence or recklessness, or it is proved that the consortium has worked diligently to cure such breach, the Brazilian federal government may, instead of terminating the Production Sharing Agreements, propose that the ANP apply designated sanctions on the relevant parties.

We and other consortium members will use our best efforts to settle any disputes. If we are unable to do so, any consortium member may submit such dispute or controversy to an ad hoc arbitration following the rules established by the UNCITRAL, or by the consent of the parties in interest, to the ICC, or any other well-regarded arbitration chamber. If a dispute involves only public administration entities, it may be submitted to conciliation service of the *Câmara de Conciliação e Arbitragem da Administração Federal*, or CCAF, under the AGU. In the event of a dispute involving non-negotiable rights, the parties shall submit the dispute to the federal courts in Brasília, Brazil.

The Production Sharing Agreements are governed by Brazilian law.

## Amendment to the Transfer of Rights Agreement

The Transfer of Rights Agreement was executed in 2010. Its amendment was approved in 2019 by the TCU and the CNPE and our governing bodies.

The parties involved discussed several scenarios about the revision of the original agreement, as both of them could be simultaneously creditor and/or debtor. The amendment consolidates one such scenario, resulting in a credit of US\$9,058 billion in our favor, which was fully paid in December 2019.

In addition to such credit, the main changes as a result of the amendment to the Transfer of Rights Agreement were (i) the local content clauses that lowered the local content requirements for the production phase (development and production stages) and (ii) the dispute resolution provisions that became similar to the provisions of the Production Sharing Agreements of the latest ANP bid rounds.

For more information concerning our other material contracts, see “Our Business” and “Operating and Financial Review and Prospects” in this annual report.

## Legal Proceedings

We are currently party to numerous legal proceedings relating to civil, administrative, tax, labor, criminal, environmental and corporate issues arising in the normal course of our business. These proceedings involve claims for substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. Our audited consolidated financial statements only include provisions for probable and reasonably estimable losses and expenses we may incur in connection with pending proceedings.

Some of our main legal proceedings are listed below.

### Lava Jato Investigation

In 2009, the Brazilian federal police began an investigation aimed at criminal organizations engaged in money laundering in several Brazilian states, known as “Car wash” operation (“Lava Jato”). The Lava Jato investigation is extremely broad and comprises numerous investigations into several criminal practices, spanning crimes and conduct committed by individuals in different parts of the country and different sectors of the Brazilian economy. In 2014, Lava Jato started to focus part of its investigation on irregularities involving our contractors and suppliers and uncovered a broad payment scheme that involved a wide range of participants, including our former personnel. It is possible that further information damaging us and our interests will come to light in the course of the ongoing investigations of corruption by Brazilian authorities.

We are not a target of the Lava Jato investigation and we are formally recognized, by the Brazilian authorities, as a victim of the improper payments scheme. We will continue to pursue legal measures against companies and individuals, including former employees and politicians, who have caused financial and image damages to us. We have been working together with the Brazilian Federal Prosecutor’s Office, the Brazilian federal police, the Federal Revenue Services and other competent authorities since the beginning of the investigation. The total amount of restitution paid to us since the beginning of Lava Jato through December 31, 2020 was US\$1,287 million (about US\$155 million in 2020, US\$220 million in 2019, US\$457 million in 2018, US\$252 million in 2017, and US\$131 million in 2016).

For further information regarding Lava Jato and its impacts on us, see Note 23 to our audited consolidated financial statements.

## Investigations Carried out by Authorities

### U.S.: SEC, DoJ and the US Commodity Futures Trading Commission (“CFTC”)

Because our ADRs are traded on the NYSE, we are subject to SEC and DoJ regulations. In 2014, the SEC and DoJ initiated investigations in connection with the facts disclosed in connection with Lava Jato. We have fully cooperated with their investigations.

In September 2018, we entered into agreements with the SEC and the DoJ related to our internal controls, accounting records and financial statements for the period 2003 to 2012, which fully resolved their respective investigations. Under the terms of these agreements, we paid US\$85.3 million to the DoJ, US\$85.3 million to the SEC and US\$682.6 million to Brazilian authorities.

In our agreements with them, the DoJ and SEC recognize improvements to our compliance program, internal controls and anti corruption procedures. We have committed to continue evaluating and improving these and other efforts. We believe the resolution of the SEC and DOJ investigations was in our best interests and the best interests of our shareholders, and eliminates uncertainties, risks, burdens and costs of potential litigations in the United States.

In May 2019, the CFTC contacted us with an inquiry regarding trading activities related to Lava Jato. We reiterate that we will continue to cooperate with regulatory authorities, including the CFTC, regarding any inquiry, reinforcing our commitment to integrity and transparency.

### Brazil: Prosecutor’s Office

In 2015, the state of São Paulo Prosecutor’s Office established a civil proceeding to investigate the existence of potential damages caused by us to investors listed in the Brazilian stock market. However, the Brazilian Federal Prosecutor’s Office assessed this civil proceeding and determined that the São Paulo Public Prosecutor’s Office has no authority over this matter, which must be presided over by the Brazilian Federal Prosecutor’s Office. We have provided all relevant information required by the authorities.

## Petrobras’ Investor Claims

### Netherlands: Collective action in the Netherlands

In 2017, the Stichting Petrobras Compensation Foundation (“Foundation”) filed a collective action before the district court in Rotterdam, in the Netherlands, against us and our subsidiaries PIBBV and PGF, joint venture PO&G and some of our former officers.

In the collective claim the Foundation allegedly represents the interests of an unidentified group of investors and alleges that as a result of the facts uncovered by Lava Jato, the defendants acted unlawfully toward investors.

In January 2020, the court considered that shareholders who understand Portuguese and/or who bought shares through intermediaries or other agents that understand such language, among others, are bound by the arbitration clause of our Bylaws, and cannot be party to the collective action filed by the Foundation. The court also considered the binding effect of the US class settlement. In light of this, the Foundation must establish that it represents a sufficient group of investors to justify the continuance of a collective claim in the Netherlands. The Foundation filed its submission on May 6, 2020 and we filed our submission on August 11, 2020. The oral arguments were presented in a hearing held on January 26, 2021 and a decision is still pending.

The Foundation only seeks declaratory reliefs from the Dutch court and is not able to demand compensation for damages. Compensation for the alleged damages will only be determined by court rulings if subsequent complaints are filed by individual investors.

At this current stage, due to substantial uncertainties inherent to this kind of proceedings and the highly uncertain impacts of such allegations, it is not possible for us to identify possible risks related to this action and to produce a reliable estimate of eventual loss.

Moreover, currently, it is not possible to determine if investors will be able to file subsequent individual complaints against us and if we will be found responsible for the payment of compensation, as this assessment depends on the outcome of this action.

We, along with our subsidiaries, deny the allegations presented by the Foundation and intend to defend ourselves vigorously. We are a victim of the corruption scheme uncovered by Lava Jato and aim to present and prove this before the Dutch court.

## Other Related Investor Claims

### Arbitration in Brazil

We are also currently a party to seven arbitration proceedings brought by Brazilian and foreign investors that purchased our shares traded on the B3, alleging financial losses caused by facts uncovered in Lava Jato.

Due to substantial uncertainties inherent to these kinds of proceedings and the highly uncertain impacts of such allegations, it is not possible for us to identify possible risks related to this action and to produce a reliable estimate of eventual loss.

Depending on the outcome of these claims, we may have to pay substantial amounts, which may have a significant effect on our financial condition.

Most of these arbitrations are far from a definitive judgment by the respective arbitral tribunals. However, in one of the arbitrations, proposed by two institutional investors, on May 26, 2020, a partial arbitration award has been issued. The partial award indicates our liability, but does not determine our payment of amounts, nor does it end the procedure. This arbitration is confidential, as well as the others in progress, and the partial award represents only the position of the three arbitrators of such arbitration panel and are not extendable to the other existing arbitrations. On July 20, 2020, we filed a lawsuit for the annulment of this partial arbitration award, considering our view that it contains serious flaws and improprieties. On November 10, 2020, the first level judge of Rio de Janeiro state court declared the partial award null. The appeals against this decision are pending. In compliance with CAM rules, the lawsuit is confidential. We reiterate that we will continue to defend ourselves vigorously, out of respect for our current shareholders, in all arbitrations to which we are a party.

### **Arbitration in Argentina**

In 2018, we were served with an arbitral claim filed by Consumidores Financieros Asociación Civil para su Defensa (the “Association”) against us and other individuals and legal entities, before the “Tribunal de Arbitraje General de la Bolsa de Comercio de Buenos Aires” (“Arbitral Tribunal”).

Among other issues, the Association alleged our liability for a supposed loss of market value of our shares in Argentina, due to proceedings related to Lava Jato.

In June 2019, the Arbitral Tribunal decided that the arbitral claim should be considered withdrawn due to the lack of payment of the arbitral fee by the Association. The Association has filed appeals that were rejected by the court of appeals on November 20, 2019. The Association has appealed to the Argentinian Supreme Court, and a final decision is still pending.

## **Criminal Actions in Argentina**

We were accused of these two criminal actions in Argentina, as described below:

- Criminal action alleging non-compliance by us with the obligation to publish as “relevant fact” to the Argentinian market the existence of a class action claim filed by Consumidores Financieros Asociación Civil para su Defensa before the Judicial Commercial Courts (Judicial Commercial Claim), pursuant to provisions of Argentine capital market law. It is worth mentioning that the Judicial Commercial Claim had never been served to us. This criminal court docket is being handled by Criminal Economic Court No. 3 of the city of Buenos Aires. We have filed procedural defenses before the criminal court and some of them are still pending.

- Criminal action alleging fraudulent offer of securities aggravated by allegedly having stated false data in our financial statements issued in 2015. This criminal court docket is being handled by Criminal Economic Court No. 2 of the city of Buenos Aires. We have filed procedural defenses before the criminal court and some of them are still pending judgement. On September 14, 2020, the judge accepted our defense grounded in jurisdiction immunity and decided that we cannot be sued in criminal proceedings before the Argentine Courts. The Association appealed against this decision, and the appeal is pending judgment.

## Sete Brasil's Investor Claim and Mediation Procedure

We are currently a party to a lawsuit in the District Court of the District of Columbia in Washington, D.C. filed by EIG in 2016, a complaint against us concerning its indirect purchase of equity interests in Sete Brasil, a company created in order to build rigs with high local content. In this proceeding, EIG alleges that we induced investors to invest in Sete Brasil and that we were among the parties responsible for the financial crisis of Sete Brasil, which filed judicial recovery proceedings (“recuperação judicial”), in Brazil.

The District Court denied our motion to dismiss on various grounds including sovereign immunity and ruled that the claims could proceed to discovery, which is the exchange of legal information and known facts of a case between the parties. We appealed the decision to the United States Court of Appeals for the District of Columbia Circuit, which affirmed the court's decision. We presented a petition for writ of certiorari to the Supreme Court of the United States that was denied. We subsequently moved the District Court to stay the case pending arbitration, which was denied. We have appealed that decision and that appeal was denied. During 2020, the parties engaged in extensive document exchanges and other written discovery. The parties also have taken the depositions of numerous fact witnesses. Depositions will continue in 2021 and then the parties will proceed to expert discovery.

We were also a party to arbitrations in Brazil filed by investors of Sete Brasil, which concluded in 2020 when a favorable arbitration award was granted to us. On April 1, 2020, July 29, 2020, and on December 17, 2020, we disclosed the settlement of three other arbitrations related to the investment in Sete Brasil.

In addition, as result of an extrajudicial mediation initiated in 2017 in Brazil, in 2019 our Board of Directors approved the final terms of an agreement to be executed between us and Sete Brasil, the key terms of which include: (i) maintenance of charter and operation contracts referring to four drilling rigs, with termination of signed contracts in relation to the other twenty-four drilling rigs; (ii) the contracts shall have effect for ten years, with a daily rate of US\$299 thousand, including the chartering and operation of the units; (iii) and our removal and the removal of our subsidiaries from the shareholding structure of the companies of Grupo Sete Brasil and FIP Sondas until we no longer hold any shares in such company; and (iv) the resulting dissolution of all other contracts that are not compatible with the terms of the agreement. Magni Partners shall charter the rigs to us and the rigs shall be operated by Etesco.

In 2020, the settlement agreement was executed by PNBV, Sete Brasil, other group companies and us, however Sete Brasil notified us in late January 2021 that certain required conditions would not be fulfilled prior to the deadline of January 31, 2021. As a result, our Executive Board authorized the beginning of a new negotiation with Sete Brasil.

We no longer hold any direct or indirect equity in the companies of the Sete Brasil Group.

## Other Legal proceedings

### Legal Proceedings and Preliminary Procedure on TCU – Divestments

There are some judicial proceedings (mainly civil suits), which allege a supposed lack of publicity and competitiveness in our proceedings, and in some cases the purchase price, for the sale of participation shares in controlled companies and assets, such as exploration and production rights in Oil & Gas Fields (“Divestment Bids”). Some bids were suspended due to injunctions granted under preliminary analysis, which were reversed after we presented our statement of defense and/or appeals. Although the aforementioned court proceedings are still pending on the final awards, there is no injunction preventing any Divestment Bid.

There are constitutional actions filed before the Brazilian Supreme Court challenging the constitutionality of the Decree No. 9,188/2017, which sets forth rules for divestment of assets and controlled affiliates by federal mixed-capital corporations, including us. Due to the preliminary injunction granted on June 27, 2018 by the Supreme Court’s Minister Ricardo Lewandowski in Direct Unconstitutionality Action – ADI 5624 MC/DF, which presumably could affect its Divestments, we have suspended some sales, according to the press release dated July 3, 2018. On June 6, 2019, the court partially revised the injunction to the extent that state companies are allowed to sell their corporate control in affiliates’ companies provided that such state companies were granted a general authorization to do so by their law of incorporation and that the sale process is competitive and executed in accordance with the constitutional principles applicable to the public administration, pursuant to Federal Decree No. 9,188/2017. Hence, we may seek the divestment of assets and controlled affiliates, without any constraint. Another constitutional action (Direct Unconstitutionality Action 5841), with the same purpose, was filed and the Brazilian Supreme Court has denied the injunction in virtual sessions held in December 2020. The final decision of both constitutional procedures are still pending.

Also, there is a Direct Unconstitutionality Action filed against Federal Decree No. 9,355/18 (“Federal Decree”) that aims at the immediate suspension of its effects and a declaration of unconstitutionality for allegedly disregarding the provisions of articles 28 to 84 of Law No. 13,303/16 and the principles of legality, morality, impersonality and efficiency (Direct Unconstitutionality Action – ADI -5942).

On December 19, 2018, a preliminary injunction was granted to suspend the effectiveness of the Federal Decree and order us to follow the rules of Law No. 13,303/16 in relation to the procedures for the assignment of exploration and production rights in Brazil (“Decision”). On January 11, 2019, the President of the Supreme Court granted a preliminary injunction to suspend the effects of the Decision until the judgment by the plenary of the court, which occurred in virtual sessions in October, 2020. The court has ruled the claim groundless by a decision yet to be published in the Federal Official Gazette on February 8, 2021.

With respect to TCU, all projects included in our divestment portfolio (excluding partnerships and acquisitions, subject to another set of rules) follow the methodology deemed appropriate by TCU under administrative procedure TC-013.056/2016 -6. Recently, our divestment process methodology was reviewed and forwarded to TCU under administrative procedure TC-009.508/2019 -8. The most up-to-date methodology took effect on December 23, 2020.

## Labor Proceedings

### RMNR

There are a number of lawsuits relating to Minimum Compensation per Level and Working Regime (“RMNR”) with the purpose to review its calculating criteria.

The RMNR consists of a minimum compensation guaranteed to the workforce, based on the salary level, the work regime and condition and the geographic location. This compensation policy was created and implemented in 2007 as a result of collective bargaining with union representatives and approval in employee assemblies, and it was only challenged three years after its implementation. The matter at dispute is whether to include additional working arrangements and special working conditions as a complement to RMNR.

In 2018, the Brazilian Superior Labor Court (“TST”) ruled against us and we filed an appeal against its decision. The STF suspended the effects of the decision issued by the TST and called for the national suspension of the ongoing proceedings relating to RMNR.

### Applicable rate

Since several judges were considering the application of the rate provided for by the law (“Taxa Referencial”) to be unconstitutional, the matter was referred to the STF. In December 2020, the STF decided that, in labor litigation, the IPCA-E rate should be applied up until the date that the process is initiated, and the SELIC rate should be applied as of the date that the process has been initiated. However, this decision has not yet been published officially, and its exact content is not yet available. This may have an effect on our provisions, including RMNR provisions.

## Unification of Fields

We filed four arbitrations under the ICC administration challenging the ANP's decision to unify our unconnected oil fields (Parque das Baleias, Tupi and Cernambi; Baúna and Piracaba; Tartaruga Verde and Tartaruga Mestiça). The Parque das Baleias arbitration was terminated by means of an agreement executed by the parties.

In the case of the Tartaruga Mestiça and Tartaruga Verde arbitration, the Federal Court of Rio de Janeiro upheld the competence-competence principle, in which the arbitral tribunal is entitled to rule on its own jurisdiction of the case. Thus, this arbitration was resumed and at the hearings held in December 2020, the parties presented a brief "case exposition" and arguments related to the discussion of preliminary issues.

In relation to the Baúna and Piracaba arbitration, a judicial injunction is keeping it suspended. The Federal Court of Rio de Janeiro will decide an appeal filled by us to resume the arbitration proceeding.

In addition, the BM-S-11 Consortium, formed with Shell and Petrogal, of which we are the operator, challenged the ANP's decision on unifying Tupi and Cernambi fields. The arbitration remains suspended due to a judicial injunction. Currently, the Brazilian Superior Court decided to annul the former judgment issued by the Federal Court of Rio de Janeiro in order to determine a new trial. Therefore, the Federal Court will once again decide which court (the state court or arbitral tribunal) should decide the merits of the case.

## Drilling contract with Vantage

Furthermore, we were a party to an arbitration with Vantage Deepwater Company and Vantage Deepwater Drilling, Inc. (collectively, "Vantage") administered by the International Centre for Dispute Resolution and related to a drilling contract we entered into with Vantage. In July 2018, a tribunal of three members concluded by majority, with one dissenting opinion, Vantage was entitled to receive US\$622.02 million, plus interest of 15.2% per annum compounded monthly, as compensation for the early termination of said contract and invoices related to the drilling of a well in the Gulf of Mexico. We filed a motion to vacate the award before a Federal Court in Texas, arguing that we had been denied the fundamental safeguards of due process, as expressed by the dissenting arbitrator's opinion. Vantage sought and obtained attachments from a Dutch court, which were served in 2018, blocking the shares of our Netherlands-based subsidiaries and any amounts and assets due to us, arising from obligations of our Netherlands-based subsidiaries to secure payment of the arbitral award. In May 2019, the Federal Court confirmed the arbitration award and denied our motion to vacate it. In June 2019, our subsidiaries paid approximately US\$700 million related to such decision. The payment ceased accruing interest, allowed the lifting of the pre-judgment attachments of our Netherland-based subsidiaries and avoided other legal constraints, but did not end the dispute. We appealed the decision in June 2019. In July 2020, the Court of Appeals affirmed the Federal Court decision and rejected the appeal. The Court of Appeals subsequently rejected our petitions for rehearing in August 2020. In January

2021, we filed a petition for a writ of certiorari before the Supreme Court of the United States, which was denied.

## Environmental

The state of Rio de Janeiro Prosecutor's Office filed five public civil actions against us, the State Environmental Institute ("INEA") and the state of Rio de Janeiro (collectively, the "Defendants"), in June 2018, requesting that the Defendants present proof of compliance with environmental licensing regulations related to COMPERJ, complement technical research, re-define certain conditions applicable to the environmental licensing process and compensate for collective damages to property, moral damages and damages to communities affected by any environmental impact related to COMPERJ. The amount claimed was US\$2.096 billion. In August 2019, we signed an agreement ("termo de ajustamento de conduta") in the amount of US\$208 million with the state of Rio de Janeiro, the Prosecutor's Office and INEA, to conclude one of the civil actions concerning the environmental licensing of COMPERJ. Regarding the four other civil actions, they have been partially settled by the first agreement and another agreement ("termo de ajustamento de conduta") in the amount of US\$11 million was signed in February 2020 with the same parts to conclude them. As a result, the judicial procedures were archived.

Additionally, since 2000, we are party to another public civil action regarding the OSPAR pipeline, related to the obligation to compensate damages and alleged moral damages resulting from the environmental accident that occurred in the state of Paraná on July 16, 2000. We had a court decision condemning us and the amount of US\$150 million was provisioned. Clarification appeals have been filed and we are currently considering further appeals.

For further information on our material legal proceedings, see Note 20 to our audited consolidated financial statements.

## Tax Proceedings

We are currently party to legal proceedings relating to tax claims. For further information on our material tax proceedings, see Note 20 to our audited consolidated financial statements.

# Tax

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## Tax Strategy and Effect of Taxes on Our Income

Our tax strategy outlines the compliance with tax laws of Brazil and other countries, where we operate as a corporation that influences the economic and social environment of which we are part. We also aim at engaging with tax authorities in an ethical and transparent manner. Considering that we are the biggest taxpayers in Brazil, our engagement with tax authorities may result in various effects on tax collection at the federal, state and municipal levels, as well as production taxes under the ANP.

We are subject to tax on our income at a Brazilian statutory corporate rate of 34%, comprising of a 25% rate of income tax and a social contribution tax at a 9% rate. Since 2015, we have been recognizing income tax expenses over non-exempt income generated by our foreign subsidiaries based on Brazilian statutory corporate rates as established by Law No. 12,973/2014.

In addition to taxes paid on behalf of consumers to the Brazilian federal government, as well as state and municipal governments, such as the value-added tax (Imposto sobre Circulação de Mercadorias e Serviços, or "ICMS"), we are required to pay three main charges on our oil production activities in Brazil under the scope of the ANP: (i) royalties, (ii) special participation and (iii) retention bonuses. See "– Taxation under Concession Regime for Oil and Gas" below and "Risks – Risk Factors – Government Ownership and Country Risks" in this annual report. These charges imposed by the Brazilian federal government are included in our cost of sales.

## Taxation under Concession Regime for Oil and Gas

According to Law No. 9,478/1997 and under our concession agreements for exploration and production activities with the ANP, we are required to pay the government the following:

- Signing bonuses paid upon the execution of the concession agreement, which are based on the amount of the winning bid, subject to the minimum signing bonuses published in the relevant bidding guidelines (edital de licitação);
- Annual retention bonuses for the occupation or retention of areas available for exploration and production, at a rate established by the ANP in the relevant bidding guidelines based on the size, location and geological characteristics of the concession block;

- Special participation charges at a rate ranging from 0 to 40% of the net income derived from the production of fields that reach high production volumes or profitability, according to the criteria established in the applicable legislation. Net revenues are gross revenues, based on reference prices for crude oil or natural gas established by Decree No. 2,705 and ANP regulatory acts, less royalties paid, investments in exploration, operational costs and depreciation adjustments and applicable taxes. In 2020, we paid this government take on 10 of our fields, namely Jubarte, Leste do Urucu, Marlim, Marlim Sul, Mexilhão, Rio Urucu, Roncador, Sapinhoá, Tartaruga Verde and Tupi; and
- Royalties to be established in the concession contracts at a rate ranging between 5% and 10% of gross revenues from production, based on reference prices for crude oil or natural gas established in its regulatory acts. In establishing royalty rates in the concession contracts, the ANP also takes consideration the geological risks and expected productivity levels for each concession. Most of our crude oil production is currently paid at the maximum royalty rate.

Law No. 9,478/1997 also requires concessionaires of onshore fields to pay to the owner of the land a participation fee that varies between 0.5% and 1.0% of the sales revenues derived from the production of the field.

## Taxation Model for the Oil and Gas Industry (Repetro-SPED)

On December 28, 2017, the Brazilian federal government enacted Law No. 13,586, which outlined a new taxation model for the oil and gas industry and, along with the Decree No. 9,128/2017, established a new special regime for exploration, development and production of oil, gas and other liquid hydrocarbons named Repetro-Sped, which will expire in December 2040.

This regime provides for the continuation of total tax relief over goods imported with temporary permanence in Brazil, as previously established by the former Repetro (special customs regime for the export and import of goods designated to exploration and production of oil and natural gas reserves), and adds this relief to goods permanently held in Brazil. This benefit allowed for the migration of all the goods acquired in the former Repetro to the Repetro-Sped.

In 2018, we started to transfer the ownership of oil and gas assets under this regime from our foreign subsidiaries to our parent company and the joint ventures (consortia) in Brazil. The transfer was completed in 2020.

In addition, the legislation prescribes the Repetro-Industrialização, a special tax regime, regulated in 2019, which exempts acquisitions from the O&G supply chain established in Brazil.

Following the creation of Repetro-Sped and Repetro-Industrialização, some Brazilian states, pursuant to a decision by the Brazilian National Council of Finance Policies (CONFAZ), agreed to grant tax incentives relating to the value added tax (ICMS) over transactions under these regimes to the extent each state enacts its specific regulation providing for the tax relief on the oil and gas industry.

## Taxation Relating to the ADSs and our Common and Preferred Shares

The following summary contains a description of material Brazilian and U.S. federal income tax considerations that may be relevant to the purchase, ownership and disposition of preferred or common shares or ADSs by a holder. This summary does not describe any tax consequences arising under the laws of any state, locality or taxing jurisdiction other than Brazil and the United States.

This summary is based upon the tax laws of Brazil and the United States as in effect on the date of this annual report, which are subject to change (possibly with retroactive effect). This summary is also based upon the representations of the depositary and on the assumption that the obligations in the deposit agreement and any related documents will be performed in accordance with their respective terms.

This description is not a comprehensive description of the tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules that are generally applicable to all taxpayers or to certain classes of investors or rules that investors are generally assumed to know. Prospective purchasers of common or preferred shares or ADSs should consult their own tax advisors as to the tax consequences of the acquisition, ownership and disposition of common or preferred shares or ADSs.

There is no income tax treaty between the United States and Brazil. In recent years, the tax authorities of Brazil and the United States have held discussions that may culminate in such a treaty. We cannot predict, however, whether or when a treaty will enter into force or how it will affect the U.S. holders of common or preferred shares or ADSs.

## Brazilian Tax Considerations

### General

The following discussion summarizes the material Brazilian tax consequences of the acquisition, ownership and disposition of preferred or common shares or ADSs, as the case may be, by a holder that is not deemed to be domiciled in Brazil for purposes of Brazilian taxation, also called a non-Brazilian holder.

Under Brazilian law, investors (non-Brazilian holders) may invest in the preferred or common shares under CMN Resolution No. 4,373 or under Law No. 4,131/1962. The rules of CMN Resolution No. 4,373 allow foreign investors to invest in almost all instruments and to engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are met. In accordance with CMN Resolution No. 4,373, the definition of foreign investor includes individuals, legal entities, mutual funds and other collective investment entities, domiciled or headquartered abroad.

Pursuant to this rule, foreign investors must: (i) appoint at least one representative in Brazil with powers to perform actions relating to their foreign investment (such as registration and keeping updated records of all transactions with the Central Bank of Brazil); (ii) complete the appropriate foreign investor registration form; (iii) register as a foreign investor with the CVM; and (iv) register the foreign investment with the Central Bank of Brazil.

On October 1, 2020, CMN Resolution No. 4,852 amended Resolution No. 4,373, allowing CVM to release non-resident individual investors from the obligation to obtain registration with CVM.

Securities and other financial assets held by foreign investors pursuant to CMN Resolution No. 4,373 must be registered or maintained in deposit accounts or under the custody of an entity duly licensed by the CVM. In addition, securities trading is restricted to transactions carried out in the stock exchanges or organized over-the-counter markets authorized by the CVM.

## Taxation of Dividends

Generally speaking, dividends paid by us, including stock dividends and other dividends paid in property to the Depositary in respect of the ADSs, or to a non-Brazilian holder in respect of the preferred or common shares, are not subject to withholding income tax in Brazil, to the extent that such amounts are related to profits generated after January 1, 1996.

We must pay to our shareholders (including non-Brazilian holders of common or preferred shares or ADSs) interest on the amount of dividends payable to them, updated by the SELIC rate, from the end of each fiscal year through the date of effective payment of those dividends. These interest payments are considered fixed-yield income and are subject to withholding income tax at varying rates depending on the length of period of interest accrual. The tax rate for payments made to beneficiaries resident or domiciled in Brazil varies from 15%, in case of interest accrued for a period greater than 720 days, 17.5% in case of interest accrued for a period between 361 and 720 days, 20% in case of interest accrued for a period between 181 and 360 days, and to 22.5%, in case of interest accrued for a period up to 180 days. However, when the beneficiary is a non-Brazilian holder, under CMN Resolution No. 4,373 rules, the general applicable withholding income tax rate over interest is 15% except in case the beneficiary is resident or domiciled in a country or other jurisdiction that does not impose income tax or imposes it at a maximum income tax rate lower than 17% (a Low or Nil Tax Jurisdiction) or, based on the position of the Brazilian tax authorities, a country or other jurisdiction where the local legislation does not allow access to information related to the shareholding composition of legal entities, to their ownership or to the identity of the effective beneficiary of the income attributed to shareholders (the “Non-Transparency Rule”), when the applicable withholding income tax rate will be 25%. See “Tax – Taxation of Dividends – Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction” in this annual report.

## Taxation on Interest on Capital

Any payment of interest on capital to holders of ADSs or preferred or common shares, whether or not they are Brazilian residents, is subject to Brazilian withholding income tax at the rate of 15% at the time we record such liability, whether or not the effective payment is made at that time. See “Shareholder Information – Dividends – Payment of Dividends and Interest on Capital” in this annual report. In the case of non-Brazilian residents that are resident in a Low or Nil Tax Jurisdiction (including in the view of Brazilian authorities the jurisdictions to which the Non-Transparency Rule applies), the applicable withholding income tax rate is 25%. See “Tax – Taxation of Dividends – Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction” in this annual report. The payment of interest with respect to updating recorded distributions by the SELIC rate that is applicable to payments of dividends applies equally to payments of interest on capital. The determination of whether or not we will make distributions in the form of interest on capital or in the form of dividends is made by our Board of Directors at the time distributions are to be made. We cannot determine how our Board of Directors will make these determinations in connection with future distributions.

## Taxation of Gains

For purposes of Brazilian taxation on capital gains, two types of non-Brazilian holders have to be considered: (i) non-Brazilian holders of ADSs, preferred shares or common shares that are not resident or domiciled in a Low or Nil Tax Jurisdiction, and that, in the case of preferred or common shares, have registered before the Central Bank of Brazil and the CVM in accordance with CMN Resolution No. 4,373; and (ii) any other non-Brazilian holder, including non-Brazilian holders who invest in Brazil not in accordance with CMN Resolution No. 4,373 (including registration under Law No. 4,131/1962) and who are resident or domiciled in a Low or Nil Tax Jurisdiction. See “Tax – Taxation of Dividends – Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction” in this annual report.

According to Law No. 10,833/2003, capital gains realized on the disposition of assets located in Brazil by non-Brazilian holders, whether or not to other non-residents and whether made outside or within Brazil, may be subject to taxation in Brazil. With respect to the disposition of common or preferred shares, as they are assets located in Brazil, the non-Brazilian holder may be subject to income tax on any gains realized, following the rules described below, regardless of whether the transactions are conducted in Brazil or with a Brazilian resident. We understand the ADSs do not fall within the definition of assets located in Brazil for the purposes of this law, but there is still neither pronouncement from tax authorities nor judicial court rulings in this respect. Therefore, we are unable to predict whether such understanding will prevail in the courts of Brazil.

Although there are grounds to sustain otherwise, the deposit of preferred or common shares in exchange for ADSs may be subject to Brazilian taxation on capital gains if the acquisition cost of the preferred or common shares is lower than the average price per preferred or common share.

The difference between the acquisition cost and the market price of the preferred or common shares will be considered realized capital gain that is subject to taxation as described below. There are grounds to sustain that such taxation is not applicable with respect to non-Brazilian holders registered under the rules of CMN Resolution No. 4,373 and not resident or domiciled in a Low or Nil Tax Jurisdiction.

The withdrawal of ADSs in exchange for preferred or common shares should not be considered as giving rise to a capital gain subject to Brazilian income tax, provided that on receipt of the underlying preferred or common shares, the non-Brazilian holder complies with the registration procedure with the Central Bank of Brazil as described below in “Registered Capital.”

Capital gains realized by a non-Brazilian holder on a sale or disposition of preferred or common shares carried out on a Brazilian stock exchange (which includes transactions carried out on the organized over-the-counter market) are:

- exempt from income tax when the non-Brazilian holder (i) has registered its investment in accordance with CMN Resolution No. 4,373 and (ii) is not resident or domiciled in a Low or Nil Tax Jurisdiction;
- subject to an income tax at a 25% rate, in cases of gains realized by a non-Brazilian holder resident or domiciled in a Low or Nil Tax Jurisdiction or a jurisdiction to which the Non-Transparency Rule applies. In this case, a withholding income tax at a rate of 0.005% of the sale value is levied on the transaction which can be offset against the eventual income tax due on the capital gain; or
- in all other cases, including a case of capital gains realized by a non-Brazilian holder that is not registered in accordance with CMN Resolution No. 4,373, subject to income tax at the following progressive rates: 15% that do not exceed R\$5 million, 17.5% on the gains between R\$5 million and R\$10 million, 20% on the gains between R\$10 million and R\$30 million and 22.5% on the gains that exceed R\$30 million. In these cases, a withholding income tax at a rate of 0.005% of the sale value is levied on the transaction, which can be offset against the eventual income tax due on the capital gain.

Any capital gains realized on a disposition of preferred or common shares that is carried out outside the Brazilian stock exchange are subject to income tax above rates in case of gains realized by a non-Brazilian holder that is domiciled or resident in a Low or Nil Tax Jurisdiction or a jurisdiction to which the Non-Transparency Rule applies. In this last case, for the capital gains related to transactions conducted on the Brazilian non-organized over-the-counter market with intermediation, the withholding income tax of 0.005% will also apply and can be offset against the eventual income tax due on the capital gain.

In the case of a redemption of preferred or common shares or ADSs or a capital reduction made by us, the positive difference between the amount received by the non-Brazilian holder and the acquisition cost of the preferred or common shares or ADSs redeemed or reduced is treated as capital gain derived from the sale or exchange of shares not carried out on a Brazilian stock exchange market and is therefore generally subject to the above rates. See “Tax – Taxation of Dividends – Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction” in this annual report.

Any exercise of preemptive rights relating to the preferred or common shares will not be subject to Brazilian taxation. Any gain on the sale or assignment of preemptive rights will be subject to Brazilian income taxation according to the same rules applicable to the sale or disposition of preferred or common shares.

No assurance can be made that the current preferential treatment of non-Brazilian holders of the ADSs and some non-Brazilian holders of the preferred or common shares under CMN Resolution No. 4,373 will continue to apply in the future.

### Additional Recent Rules Regarding Taxation of Gains

On March 16, 2016, the Brazilian federal government converted the Provisional Executive Order (Medida Provisoria) No. 692 into Law No. 13,259, which established progressive income tax rates applicable to capital gains derived from the disposition of assets by Brazilian individuals. Law No. 13,259 provides for new rates that range from 15% to 22.5% depending on the amount of the gain recognized by the Brazilian individual, as follows: (i) 15% on gains not exceeding R\$5 million; (ii) 17.5% on gains that exceed R\$5 million and do not exceed R\$10 million; (iii) 20% on gains that exceed R\$10 million and do not exceed R\$30 million; and (iv) 22.5% on gains exceeding R\$30 million. Pursuant to Section 18 of Law No. 9,249/95, the tax treatment applicable to capital gains earned by Brazilian individuals also applies to capital gains earned by non-Brazilian residents (except in cases that remain subject to the application of specific rules).

## Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction

Law No. 9,779/1999 states that, except for limited prescribed circumstances, income derived from transactions by a person resident or domiciled in a Low or Nil Tax Jurisdiction will be subject to withholding income tax at the rate of 25%. A Low or Nil Tax Jurisdiction is generally considered to be a country or other jurisdiction which does not impose any income tax or which imposes such tax at a maximum rate lower than 17%. Under certain circumstances, the NonTransparency Rule is also taken into account for determining whether a country or other jurisdiction is a Low or Nil Tax Jurisdiction. In addition, Law No. 11,727/2008 introduced the concept of a “privileged tax regime,” which is defined as a tax regime which (i) does not tax income or taxes it at a maximum rate lower than 17%; (ii) grants tax benefits to non-resident entities or individuals (a) without the requirement to carry out a substantial economic activity in the country or other jurisdiction or (b) contingent on the non-exercise of a substantial economic activity in the country or other jurisdiction; (iii) does not tax or that taxes foreign source income at a maximum rate lower than 17%; or (iv) does not provide access to information related to shareholding composition, ownership of assets and rights or economic transactions carried out. We believe that the best interpretation of Law No. 11,727/2008 is that the concept of a “privileged tax regime” will apply solely for purposes of the transfer pricing rules in export and import transactions, deductibility for Brazilian corporate income taxes and the thin capitalization rules and, would therefore generally not have an impact on the taxation of a non-Brazilian holder of preferred or common shares or ADSs, as discussed herein. However, we are unable to ascertain whether the privileged tax regime concept will also apply in the context of the rules applicable to Low or Nil Tax Jurisdictions, although the Brazilian tax authorities appear to agree with our position, in view of the provisions of the Withholding Income Tax Manual (MAFON – 2020), issued by the Brazilian Revenue Service.

## Taxation of Foreign Exchange Transactions (IOF/Exchange)

Brazilian law imposes the IOF/Exchange on the conversion of *reais* into foreign currency and on the conversion of foreign currency into *reais*. Currently, for most foreign currency exchange transactions, the rate of IOF/Exchange is 0.38%. However, foreign exchange transactions related to inflows of funds to Brazil for investments made by foreign investors in the Brazilian financial and capital markets are generally subject to IOF/Exchange at a zero percent rate. Foreign exchange transactions related to outflows of proceeds from Brazil in connection with investments made by foreign investors in the Brazilian financial and capital markets are also subject to the IOF/Exchange tax at a zero percent rate. This zero percent rate applies to payments of dividends and interest on capital received by foreign investors with respect to investments in the Brazilian financial and capital markets, such as investments made by a non-Brazilian holder as provided for in CMN Resolution No. 4,373. The Brazilian executive branch may increase such rates at any time, up to 25% of the amount of the foreign exchange transaction, but not with retroactive effect.

## Taxation on Bonds and Securities Transactions (IOF/Bonds)

Brazilian law imposes IOF/Bonds on transactions involving equity securities, bonds and other securities, including those carried out on a Brazilian stock exchange. The rate of IOF/Bonds applicable to transactions involving preferred or common shares is currently zero. However, the Brazilian federal government may increase such rate at any time up to 1.5% of the transaction amount per day, but the tax cannot be applied retroactively.

The IOF on transfer of shares, which are admitted to trading on a stock exchange located in Brazil, with the specific purpose of backing the issuance of depositary receipts traded abroad have been reduced from 1.5% to zero, as of December 24, 2013.

## Other Brazilian Taxes

There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of preferred or common shares or ADSs by a non-Brazilian holder, except for gift and inheritance taxes which are levied by certain states of Brazil on gifts made or inheritances bestowed by a non-Brazilian holder to individuals or entities resident or domiciled within such states in Brazil. There are no Brazilian stamp, issue, registration, or similar taxes or duties payable by holders of preferred or common shares or ADSs.

## Registered Capital

The amount of an investment in preferred or common shares held by a non-Brazilian holder who obtains registration under CMN Resolution No. 4,373, or by the depositary representing such holder, is eligible for registration with the Central Bank of Brazil; and such registration allows the remittance outside Brazil of foreign currency, converted at the commercial market rate, acquired with the proceeds of distributions on, and amounts realized with respect to dispositions of, such preferred or common shares. The amount registered (“registered capital”) for each preferred or common share purchased as part of the international offering or purchased in Brazil after the date hereof, and deposited with the depositary, will be equal to its purchase price (in U.S. dollars). The registered capital for a preferred or common share that is withdrawn upon surrender of an ADS will be the U.S. dollar equivalent of:

- the average price of a preferred or common share on the Brazilian stock exchange on which the highest volume of such shares were traded on the day of withdrawal; or
- if no preferred or common shares were traded on that day, the average price on the Brazilian stock exchange on which the highest volume of preferred or common shares were traded in the 15 trading sessions immediately preceding the date of such withdrawal.

The U.S. dollar value of the average price of preferred or common shares is determined on the basis of the average of the U.S. dollar/*real* commercial market rates quoted by the Central Bank of Brazil information system on that date (or, if the average price of preferred or common shares is determined under the second option above, price will be determined by the average quoted rates verified on the same 15 preceding trading sessions as described above).

A non-Brazilian holder of preferred or common shares may be subject to delays in effecting such registration, which in turn may delay remittances abroad. Such a delay may adversely affect the amount, in U.S. dollars, received by the non-Brazilian holder. See “Risks – Risk Factors – Equity and Debt Securities Risks” in this annual report.

## U.S. Federal Income Tax Considerations

This summary describes material U.S. federal income tax consequences that may be relevant to a U.S. Holder (as defined below) from the ownership and disposition of common or preferred shares or ADSs. This summary is based on the U.S. Internal Revenue Code of 1986, as amended (“the Code”), its legislative history, existing and proposed U.S. Treasury regulations promulgated thereunder, published rulings by the U.S. Internal Revenue Service (IRS), and court decisions, all as in effect as of the date hereof, and all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary does not purport to be a comprehensive description of all of the tax consequences that may be relevant to a decision to hold or dispose of common or preferred shares or ADSs. This summary applies only to purchasers of common or preferred shares or ADSs who hold the common or preferred shares or ADSs as “capital assets” (generally, property held for investment), and does not apply to special classes of holders such as dealers or traders in securities or currencies, holders whose functional currency is not the U.S. dollar, holders of 10% or more of our shares, measured by voting power or value (taking into account shares held directly or through depository arrangements), tax-exempt organizations, partnerships or partners therein, financial institutions, life insurance companies, holders liable for the alternative minimum tax, securities traders who elect to account for their investment in common or preferred shares or ADSs on a mark-to-market basis, persons that enter into a constructive sale transaction with respect to common or preferred shares or ADSs, persons holding common or preferred shares or ADSs in a hedging transaction or as part of a straddle or conversion transaction, or nonresident alien individuals present in the United States for more than 182 days in a taxable year. Moreover, this summary addresses only U.S. federal income tax consequences and does not address state, local or foreign taxes or the U.S. federal estate and gift taxes or the Medicare tax on net investment income.

**EACH HOLDER SHOULD CONSULT ITS OWN TAX ADVISOR CONCERNING THE OVERALL TAX CONSEQUENCES IN ITS PARTICULAR CIRCUMSTANCES, INCLUDING THE CONSEQUENCES UNDER LAWS OTHER THAN U.S. FEDERAL INCOME TAX LAWS ADDRESSED HEREIN, OF AN INVESTMENT IN COMMON OR PREFERRED SHARES OR ADSs.**

Shares of our preferred stock will be treated as equity for U.S. federal income tax purposes. In general, a holder of an ADS will be treated as the holder of the shares of common or preferred stock represented by those ADSs for U.S. federal income tax purposes, and no gain or loss will be recognized if you exchange ADSs for the shares of common or preferred stock represented by that ADS.

In this discussion, references to ADSs refer to ADSs with respect to both common and preferred shares, and references to a “U.S. Holder” are to a holder of a common or preferred share or ADS that is:

- an individual who is a citizen or resident of the United States;
- a corporation organized under the laws of the United States, any state thereof, or the District of Columbia; or
- otherwise subject to U.S. federal income taxation on a net basis with respect to the share or the ADS.

## Taxation of Distributions

A U.S. Holder will recognize ordinary dividend income for U.S. federal income tax purposes in an amount equal to the amount of any cash and the value of any property we distribute as a dividend to the extent that such distribution is paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes, when such distribution is received by the depositary, in the case of ADSs, or by the U.S. Holder in the case of a holder of common or preferred shares. The amount of any distribution will include distributions characterized as interest on capital and the amount of Brazilian tax withheld on the amount distributed, and the amount of a distribution paid in *reais* will be measured by reference to the exchange rate for converting *reais* into U.S. dollars in effect on the date the distribution is received by the depositary, in the case of ADSs, or by a U.S. Holder in the case of a holder of common or preferred shares. If the depositary, in the case of ADSs, or U.S. Holder in the case of a holder of common or preferred shares, does not convert such *reais* into U.S. dollars on the date it receives them, it is possible that the U.S. Holder will recognize foreign currency loss or gain, which would be U.S. source ordinary loss or gain, when the *reais* are converted into U.S. dollars. Dividends paid by us will not be eligible for the dividends received deduction allowed to corporations under the Code.

Subject to certain exceptions for short-term and hedged positions, the U.S. dollar amount of dividends received by a non-corporate U.S. Holder with respect to the ADSs will generally be subject to taxation at preferential rates if the dividends are “qualified dividends.” Dividends paid on the ADSs will be treated as qualified dividends if (i) the ADSs are readily tradable on an established securities market in the United States and (ii) we were not, in the year prior to the year in which the dividend was paid, and is not, in the year in which the dividend is paid, a “passive foreign investment company” as defined for U.S. federal income tax purposes (a PFIC). The ADSs are listed on the NYSE, and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on our audited consolidated financial statements and relevant market and shareholder data, we believe that we should not be treated as a PFIC for U.S. federal income tax purposes with respect to the 2020 or

2019 taxable year. In addition, based on our audited consolidated financial statements and our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market and shareholder data, we do not anticipate becoming a PFIC for our 2021 taxable year. Based on existing guidance, it is not clear whether dividends received with respect to the shares will be treated as qualified dividends, because the shares are not themselves listed on a U.S. exchange. U.S. Holders of our ADSs should consult their own tax advisors regarding the availability of the reduced dividend tax rate in the light of their particular circumstances.

Distributions out of earnings and profits with respect to the shares or ADSs generally will be treated as dividend income from sources outside of the United States and generally will be treated as “passive category income” for U.S. foreign tax credit purposes. Subject to certain limitations, Brazilian income tax withheld in connection with any distribution with respect to the shares or ADSs may be claimed as a credit against the U.S. federal income tax liability of a U.S. Holder, or, at the U.S. Holder’s election, such Brazilian withholding tax may be taken as a deduction against taxable income (provided that the U.S. Holder elects to deduct, rather than credit, all foreign income taxes paid or accrued for the relevant taxable year). A U.S. foreign tax credit may not be allowed for Brazilian withholding tax imposed in respect of certain short-term or hedged positions in securities or in respect of arrangements in which a U.S. Holder’s expected economic profit is insubstantial. U.S. Holders should consult their own tax advisors regarding the availability of the U.S. foreign tax credit, including the translation of *reais* into U.S. dollar for these purposes, in light of their particular circumstances.

Holders of ADSs that are foreign corporations or nonresident alien individuals (non-U.S. Holders) generally will not be subject to U.S. federal income tax, including withholding tax, on distributions with respect to shares or ADSs that are treated as dividend income for U.S. federal income tax purposes unless such dividends are effectively connected with the conduct by the holder of a trade or business in the United States.

## Taxation of Capital Gains

Upon the sale or other disposition of a share or an ADS, a U.S. Holder will generally recognize U.S. source capital gain or loss for U.S. federal income tax purposes, equal to the difference between the amount realized on the disposition and the U.S. Holder’s tax basis in such share or ADS. Any gain or loss will be long-term capital gain or loss if the shares or ADSs have been held for more than one year. Non-corporate U.S. Holders of shares or ADSs may be eligible for a preferential rate of U.S. federal income tax in respect of long-term capital gains. Capital losses may be deducted from taxable income, subject to certain limitations. For U.S. federal income tax purposes, such disposition would not result in foreign source income to a U.S. Holder. As a result, a U.S. Holder may not be able to use the foreign tax credit associated with any Brazilian income taxes imposed on such gains, unless such holder can use the credit against U.S. tax due on other foreign source income. U.S. Holders should consult their own tax advisors regarding the availability of the U.S. foreign tax credit.

## Information Reporting and Backup Withholding

The payment of dividends on, and proceeds from the sale or other disposition of, the ADSs or common or preferred shares to a U.S. Holder within the United States (or through certain U.S. related financial intermediaries) will generally be subject to information reporting, and may be subject to “backup withholding” unless the U.S. Holder (i) is an exempt recipient, and demonstrates this fact when so required, or (ii) timely provides a taxpayer identification number and certifies that no loss of exemption from backup withholding has occurred and otherwise complies with applicable requirements of the backup withholding rules. Backup withholding is not an additional tax. The amount of any backup withholding collected from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder’s U.S. federal income tax liability and may entitle the U.S. Holder to a refund, so long as the required information is furnished to the IRS in a timely manner.

U.S. Holders should consult their own tax advisors about any additional reporting requirements that may arise as a result of their purchasing, holding or disposing of our ADSs, or common or preferred shares.

A non-U.S. Holder generally will be exempt from these information reporting requirements and backup withholding tax, but may be required to comply with certain certification and identification procedures in order to establish its eligibility for such exemption.

## Specified Foreign Financial Assets

Certain U.S. Holders that own “specified foreign financial assets” with an aggregate value in excess of US\$50,000 on the last day of the taxable year or US\$75,000 at any time during the taxable year are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. “Specified foreign financial assets” include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include our common and preferred shares and ADSs) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. Holders who fail to report the required information could be subject to substantial penalties. In addition, the statute of limitations for assessment of tax would be suspended, in whole or part. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment, including the application of the rules to their particular circumstances.

## Taxation Relating to PGF's Notes

The following summary contains a description of material Brazilian, Dutch, European Union and U.S. federal income tax considerations that may be relevant to the purchase, ownership and disposition of PGF's debt securities (the "notes"). This summary does not describe any tax consequences arising under the laws of any state, locality or taxing jurisdiction other than the Netherlands, Brazil and the United States.

This summary is based on the tax laws of the Netherlands, Brazil and the United States as in effect on the date of this annual report, which are subject to change (possibly with retroactive effect). This description is not a comprehensive description of all tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules generally applicable to all taxpayers or to certain classes of investors or that investors are generally assumed to know. Prospective purchasers of notes should consult their own tax advisors regarding the tax consequences of the acquisition, ownership and disposition of the notes.

There is no tax treaty to avoid double taxation between Brazil and the United States. In recent years, the tax authorities of Brazil and the United States have held discussions that may culminate in such a treaty. We cannot predict, however, whether or when a treaty will enter into force or how it will affect the U.S. Holders of notes.

## Dutch Taxation

The following is a general summary of certain material Dutch tax consequences to holders of the notes in connection with the acquisition, ownership and disposal of notes in a Dutch company. This summary does not purport to describe all possible Dutch tax consequences that may be relevant to a holder or prospective holder of the notes and does not purport to deal with the tax consequences applicable to all categories of investors, some of which may be subject to special rules. In view of its general nature, this general summary should therefore be treated with appropriate caution.

This summary is based on the tax laws of the Netherlands, published regulations thereunder and published authoritative case law, all as in effect on the date hereof, and all of which are subject to change or to different interpretation, possibly with retroactive effect. Where the text refers to the Netherlands, it refers only to the part of the Kingdom of the Netherlands located in Europe.

For Dutch tax purposes, a holder of notes may include, without limitation:

- an owner of one or more notes who, in addition to the title to such notes, has an economic interest in such notes;
- a person who or an entity that holds the entire economic interest in one or more notes;
- a person who or an entity that holds an interest in an entity, such as a partnership or a mutual fund, that is transparent for Dutch tax purposes, the assets of which comprise one or more notes; and

- an individual who or an entity that does not have the legal title to the notes, but to whom the notes are attributed based either on such individual or entity holding a beneficial interest in the notes or based on specific statutory provisions, including statutory provisions pursuant to which the notes are attributed to an individual who is, or who has directly or indirectly inherited the notes from a person who was, the settlor, grantor or similar originator of a trust, foundation or similar entity that holds the notes.

The discussion below is included for general information purposes only and is not Dutch tax advice or a complete description of all Dutch tax consequences relating to the acquisition, holding and disposal of the notes. Holders or prospective holders of notes should consult their own tax advisers as to the Dutch tax consequences of purchasing, including, without limitation, the consequences of the receipt of interest and the sale or other disposition of notes or coupons, in light of their particular circumstances.

## Withholding Tax

### Holders of Notes Not Related to PGF

All payments of interest and principal made by PGF under the notes to holders of notes other than holders that are "related entities" in respect of PGF (within the meaning of the Dutch Withholding Tax Act 2021; *Wet bronbelasting 2021*) (see below) can be made free of withholding or deduction for any taxes of any nature imposed, levied, withheld or assessed by the Netherlands or any political subdivision or taxing authority thereof or therein, unless the notes qualify as equity of PGF for Dutch tax purposes.

### Holders of Notes Related to PGF

Payments of interest and principal made by PGF under the notes to holders of notes that are related entities in respect of PGF (within the meaning of the Dutch Withholding Tax Act 2021, as defined below) may become subject to Dutch withholding tax at a rate of 25% (rate for 2021), if such related entity:

- is considered to be resident (*gevestigd*) in a jurisdiction that is listed in the yearly updated Dutch Regulation on low-taxing states and non-cooperative jurisdictions for tax purposes (*Regeling laagbelastende staten en niet-coöperatieve rechtsgebieden voor belastingdoeleinden*) (a "Listed Jurisdiction"); or
- has a permanent establishment located in a Listed Jurisdiction to which the interest payment is attributable; or
- is entitled to the interest payment for the main purpose or one of the main purposes to avoid taxation for another person; or
- is a hybrid entity (a hybrid mismatch); or
- is not resident in any jurisdiction;
- all within the meaning of the Dutch Withholding Tax Act 2021.

For the fiscal year 2021, the following 23 jurisdictions are Listed Jurisdictions: American Samoa, Anguilla, Bahamas, Bahrain, Barbados, Bermuda, the British Virgin Islands, the Cayman Islands, Fiji, Guam, Guernsey, Isle of Man, Jersey, Palau, Panama, Samoa, Seychelles, Trinidad and Tobago, Turkmenistan, Turks and Caicos Islands, Vanuatu, the United Arab Emirates and the U.S. Virgin Islands.

For purposes of the Dutch Withholding Tax Act 2021, an entity is considered a related entity in respect of PGF if:

- such entity has a Qualifying Interest (as defined below) in PGF; or
- PGF has a Qualifying Interest in such entity; or
- a third party has a Qualifying Interest in both PGF and such entity.

The term "Qualifying Interest" means a directly or indirectly held interest – either individually or jointly as part of a collaborating group (*samenwerkende groep*) – that confers a definite influence over the entity's decisions and allows the holder of such interest to determine its activities (within the meaning of case law of the European Court of Justice on the right of freedom of establishment (*vrijheid van vestiging*)).

## Taxes on Income and Capital Gains

Please note that the summary in this section does not describe the Dutch tax considerations for:

- holders of the notes if such holders, and in the case of an individual, his or her partner or certain of his or her relatives by blood or marriage in the direct line (including foster children), have a substantial interest (*aanmerkelijk belang*) or deemed substantial interest (*fictief aanmerkelijk belang*) in PGF under the Dutch Income Tax Act 2001 (*Wet inkomstenbelasting 2001*). Generally speaking, a holder of notes has a substantial interest in PGF if it has, directly or indirectly (and, in the case of an individual, alone or together with certain relatives) (i) the ownership of, a right to acquire the ownership of, or certain rights over, shares representing 5% or more of either the total issued and outstanding capital of PGF or the issued and outstanding capital of any class of shares of PGF, or (ii) the ownership of, or certain rights over, profit participating certificates (*winstbewijzen*) that relate to 5% or more of either the annual profit or the liquidation proceeds of PGF. A deemed substantial interest may arise if a substantial interest (or part thereof) has been disposed of, or is deemed to have been disposed of, on a non-recognition basis;
- pension funds, investment institutions (*fiscale beleggingsinstellingen*), exempt investment institutions (*vrijgestelde beleggingsinstellingen*) (as defined in the Dutch Corporate Income Tax Act 1969 (*Wet op de vennootschapsbelasting 1969*)) and other entities that are, in whole or in part, not subject to or exempt from Dutch corporate income tax; and
- holders of notes who are individuals and for whom the notes or any benefit derived from the notes are a remuneration or deemed to be a remuneration for activities performed by such holders or certain individuals related to such holders (as defined in the Dutch Income Tax Act 2001).

A holder of notes will not be subject to any Dutch taxes on income or capital gains in respect of the notes, including such tax on any payment under the notes or in respect of any gain realized on the disposal, deemed disposal, redemption or exchange of the notes, provided that:

- such holder is neither a resident nor deemed to be a resident of the Netherlands;
- such holder does not have, and is not deemed to have, an enterprise or an interest in an enterprise that, in whole or in part, is either effectively managed in the Netherlands or carried on through a (deemed) permanent establishment (*vaste inrichting*) or a permanent representative (*vaste vertegenwoordiger*) in the Netherlands and to which enterprise or part of an enterprise the notes are attributable;
- if such holder is an individual, such income or capital gains do not form “benefits from miscellaneous activities in the Netherlands” (*resultaat uit overige werkzaamheden in Nederland*), including without limitation activities in the Netherlands with respect to the notes that exceed “normal asset management” (*normaal, actief vermogensbeheer*);
- if such holder is an entity, the holder is not entitled to a share in the profits of an enterprise nor a co-entitlement to the net worth of an enterprise, which is effectively managed in the Netherlands, other than by way of securities, and to which enterprise the notes are attributable; and
- if such holder is an individual, the holder is not entitled to a share in the profits of an enterprise that is effectively managed in the Netherlands, other than by way of securities, and to which enterprise the notes are attributable.

A holder of notes will not be treated as a resident of the Netherlands by reason only of the execution, delivery or enforcement of its rights and obligations connected to the notes, the issue of the notes or the performance by PGF of its obligations under the notes.

## Gift and Inheritance Taxes

No gift or inheritance taxes will arise in the Netherlands with respect to an acquisition or deemed acquisition of notes by way of a gift by, or on the death of, a holder of notes who is neither resident nor deemed to be resident in the Netherlands for the relevant provisions, unless:

- in case of a gift of the notes under a suspensive condition by an individual who at the date of the gift was neither resident nor deemed to be resident in the Netherlands, such individual is resident or deemed to be resident in the Netherlands at the date of (i) the fulfillment of the condition or (ii) his/her death and the condition of the gift is fulfilled after the date of his/her death; or
- in case of a gift of notes by an individual who at the date of the gift or, in case of a gift under a suspensive condition, at the date of the fulfillment of the condition was neither resident nor deemed to be resident in the Netherlands, such individual dies within 180 days after the date of the gift or fulfillment of the condition, while being resident or deemed to be resident in the Netherlands.

For purposes of Dutch gift and inheritance taxes, amongst others, a person who holds the Dutch nationality will be deemed to be resident in the Netherlands if such person has been resident in the Netherlands at any time during the ten years preceding the date of the gift or his/her death. Additionally, for purposes of Dutch gift tax, amongst others, a person not holding the Dutch nationality will be deemed to be resident in the Netherlands if such person has been resident in the Netherlands at any time during the twelve months preceding the date of the gift.

### Value added tax (VAT)

No Dutch VAT will be payable by a holder of the notes in respect of any payment in consideration for the issue of the notes or with respect to any payment by PGF of principal, interest or premium (if any) on the notes.

### Other Taxes and Duties

No other Dutch registration taxes, or any other similar taxes of a documentary nature, such as capital tax or stamp duty, will be payable in the Netherlands by or on behalf of a holder of the notes by reason only of the purchase, ownership and disposal of the notes.

## Brazilian Taxation

The following discussion is a summary of the Brazilian tax considerations relating to an investment in the notes by a non-resident of Brazil. The discussion is based on the tax laws of Brazil as in effect on the date hereof and is subject to any change in Brazilian law that may come into effect after such date. The information set forth below is intended to be a general discussion only and does not address all possible consequences relating to an investment in the notes.

**INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISERS AS TO THE CONSEQUENCES OF PURCHASING THE NOTES, INCLUDING, WITHOUT LIMITATION, THE CONSEQUENCES OF THE RECEIPT OF INTEREST AND THE SALE, REDEMPTION OR REPAYMENT OF THE NOTES OR COUPONS.**

Generally, an individual, entity, trust or organization domiciled for tax purposes outside Brazil, or a “Nonresident,” is taxed in Brazil only when income is derived from Brazilian sources or when the transaction giving rise to such earnings involves assets in Brazil. Therefore, any gains or interest (including original issue discount), fees, commissions, expenses and any other income paid by PGF in respect of the notes issued by them in favor of non-resident holders are not subject to Brazilian taxes.

Interest, fees, commissions, expenses and any other income payable by us as guarantor resident in Brazil to a non-resident are generally subject to income tax withheld at source. The rate of withholding income tax in respect of interest payments is generally (in case of fixed yields – See “Taxation of Dividends”) 15%, unless (i) the holder of the notes is resident or domiciled in a “tax haven jurisdiction” (that is deemed to be a country or jurisdiction which does not impose any tax on income or which imposes such tax at a maximum effective rate lower than 17% or where the local legislation imposes restrictions on disclosing the identities of shareholders, the ownership of investments, or the ultimate beneficiary of earnings distributed to the non-resident – “tax haven jurisdiction”), in which case the applicable rate is 25% or (ii) such other lower rate as provided for in an applicable tax treaty between Brazil and another country where the beneficiary is domiciled. In case the guarantor is required to assume the obligation to pay the principal amount of the notes, Brazilian tax authorities could attempt to impose withholding income tax at the rate of up to 25% as described above. Although Brazilian legislation does not provide a specific tax rule for such cases and there is no official position from tax authorities or precedents from the Brazilian court regarding the matter, we believe that the remittance of funds by us as a guarantor for the payment of the principal amount of the notes will not be subject to income tax in Brazil, because the mere fact that the guarantor is making the payment does not convert the nature of the principal due under the notes into income of the beneficiary.

If the payments with respect to the notes are made by us, as provided for in the guaranties, the non-resident holders will be indemnified so that, after payment of all applicable Brazilian taxes collectable by withholding, deduction or otherwise, with respect to principal, interest and additional amounts payable with respect to the notes (plus any interest and penalties thereon), a non-resident holder will receive an amount equal to the amount that such non-resident holder would have received as if no such Brazilian taxes (plus interest and penalties thereon) were withheld. The Brazilian obligor will, subject to certain exceptions, pay additional amounts in respect of such withholding or deduction so that the non-resident holder receives the net amount due.

Gains on the sale or other disposition of the notes made outside of Brazil by a non-resident, other than a branch or a subsidiary of Brazilian resident, to another non-resident are not subject to Brazilian income tax.

In addition, payments made from Brazil are subject to the tax on foreign exchange transactions (IOF/Câmbio), which is levied on the conversion of Brazilian currency into foreign currency and on the conversion of foreign currency into Brazilian currency at a general rate of 0.38% . Other IOF/ Câmbio rates may apply to specific transactions. In any case, the Brazilian federal government may increase, at any time, such rate up to 25% but only with respect to future transactions.

Generally, there are no inheritance, gift, succession, stamp, or other similar taxes in Brazil with respect to the ownership, transfer, assignment or any other disposition of the notes by a non-resident, except for gift and inheritance taxes imposed by some Brazilian states on gifts or bequests by individuals or entities not domiciled or residing in Brazil to individuals or entities domiciled or residing within such states.

## U.S. Federal Income Taxation

The following summary sets forth material United States federal income tax considerations that may be relevant to a holder of a note that is, for U.S. federal income tax purposes, a citizen or resident of the United States or a domestic corporation or that otherwise is subject to U.S. federal income taxation on a net income basis in respect of the notes (a “U.S. Holder”). This summary is based upon the Code, its legislative history, existing and proposed U.S. Treasury regulations promulgated thereunder, published rulings by the IRS, and court decisions, all as in effect as of the date hereof, all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary does not purport to discuss all aspects of the U.S. federal income taxation which may be relevant to special classes of investors, such as financial institutions, insurance companies, dealers or traders in securities or currencies, securities traders who elect to account for their investment in notes on a mark-to-market basis, regulated investment companies, tax-exempt organizations, partnerships or partners therein, holders that are subject to the alternative minimum tax, certain short-term holders of notes, persons that hedge their exposure in the notes or hold notes as part of a position in a “straddle” or as part of a hedging transaction or “conversion transaction” for U.S. federal tax purposes, persons that enter into a “constructive sale” transaction with respect to the notes, nonresident alien individuals present in the United States for more than 182 days in a taxable year, or U.S. Holders whose functional currency is not the U.S. dollar. U.S. Holders should be aware that the U.S. federal income tax consequences of holding the notes may be materially different for investors described in the prior sentence.

In addition, this summary addresses only U.S. federal income tax consequences and does not discuss any foreign, state or local tax considerations or the Medicare tax on net investment income or under special timing rules prescribed under section 451(b) of the U.S. Internal Revenue Code. This summary only applies to original purchasers of notes who have purchased notes at the original issue price and hold the notes as “capital assets” (generally, property held for investment). U.S. Holders of notes denominated in a currency other than US\$ should consult their tax advisors regarding the application of foreign currency gain or loss rules to the notes and the treatment of any foreign currency received in respect of the notes.

**EACH INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR CONCERNING THE OVERALL TAX CONSEQUENCES IN ITS PARTICULAR CIRCUMSTANCES, INCLUDING THE CONSEQUENCES UNDER LAWS OTHER THAN U.S. FEDERAL INCOME TAX LAWS ADDRESSED HEREIN, OF AN INVESTMENT IN THE NOTES.**

## Payments of Interest

Payment of “qualified stated interest,” as defined below, on a note (including additional amounts, if any) generally will be taxable to a U.S. Holder as ordinary interest income when such interest is accrued or is actually or constructively received, in accordance with the U.S. Holder’s applicable method of accounting for U.S. federal tax purposes. In general, if a note is issued with an “issue price” that is less than its “stated redemption price at maturity” by more than a de minimis amount, such note will be considered to have “original issue discount,” or OID. For this purpose, the “issue price” generally is the first price at which a substantial amount of such notes is sold to investors for money. A U.S. Holder should consult its own tax advisors regarding the issue price for a note, in particular where the note has been issued pursuant to an exchange offer or a reopening or the note’s terms have been amended. The stated redemption price at maturity of a note generally includes all payments on the note other than payments of qualified stated interest.

In general, each U.S. Holder of a note, whether such holder uses the cash or the accrual method of tax accounting, will be required to include in gross income as ordinary interest income the sum of the “daily portions” of OID on the note, if any, for all days during the taxable year that the U.S. Holder owns the note. The daily portions of OID on a note are determined by allocating to each day in any accrual period a ratable portion of the OID allocable to that accrual period. In general, in the case of an initial holder, the amount of OID on a note allocable to each accrual period is determined by (i) multiplying the “adjusted issue price,” as defined below, of the note at the beginning of the accrual period by the yield to maturity of the note, and (ii) subtracting from that product the amount of qualified stated interest allocable to that accrual period. U.S. Holders should be aware that they generally must include OID in gross income as ordinary interest income for U.S. federal income tax purposes as it accrues, in advance of the receipt of cash attributable to that income. The “adjusted issue price” of a note at the beginning of any accrual period will generally be the sum of its issue price (generally including accrued interest, if any) and the amount of OID allocable to all prior accrual periods, reduced by the amount of all payments other than payments of qualified stated interest (if any) made with respect to such note in all prior accrual periods. The term “qualified stated interest” generally means stated interest that is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually during the entire term of a note at a single fixed rate of interest, or subject to certain conditions, based on one or more interest indices.

Interest income, including OID, in respect of the notes will constitute foreign source income for U.S. federal income tax purposes and, with certain exceptions, will be treated separately, together with other items of “passive category income,” for purposes of computing the foreign tax credit allowable under the U.S. federal income tax laws. The calculation of foreign tax credits involves the application of complex rules that depend on a U.S. Holder’s particular circumstances. U.S. Holders should consult their own tax advisors regarding the availability of foreign tax credits and the treatment of additional amounts.

## Sale or Disposition of Notes

A U.S. Holder generally will recognize capital gain or loss upon the sale, exchange, retirement or other disposition of a note in an amount equal to the difference between the amount realized upon such sale, exchange, retirement or other disposition (other than amounts attributable to accrued qualified stated interest, which will be taxed as such) and such U.S. Holder's adjusted tax basis in the note. A U.S. Holder's adjusted tax basis in the note generally will equal the U.S. Holder's cost for the note increased by any amounts included in gross income by such U.S. Holder as OID, if any, and reduced by any payments other than payments of qualified stated interest on that note. Gain or loss realized by a U.S. Holder on the sale, exchange, retirement or other disposition of a note generally will be U.S. source gain or loss for U.S. federal income tax purposes unless it is attributable to an office or other fixed place of business outside the United States and certain other conditions are met. The gain or loss realized by a U.S. Holder will be capital gain or loss, and will be long-term capital gain or loss if the notes were held for more than one year. The net amount of long-term capital gain recognized by an individual holder generally is subject to taxation at preferential rates. Capital losses may be deducted from taxable income, subject to certain limitations.

## Backup Withholding and Information Reporting

A U.S. Holder may, under certain circumstances, be subject to "backup withholding" with respect to certain payments to that U.S. Holder, unless the holder (i) is an exempt recipient, and demonstrates this fact when so required, or (ii) provides a correct taxpayer identification number, certifies that it is not subject to backup withholding and otherwise complies with applicable requirements of the backup withholding rules. Any amount withheld under these rules generally will be creditable against the U.S. Holder's U.S. federal income tax liability. While non-U.S. Holders generally are exempt from backup withholding, a non-U.S. Holder may, in certain circumstances, be required to comply with certain information and identification procedures in order to prove entitlement to this exemption.

U.S. Holders should consult their own tax advisors about any additional reporting requirements that may arise as a result of their purchasing, holding or disposing of the notes.

## Specified Foreign Financial Assets

Certain U.S. Holders that own “specified foreign financial assets” with an aggregate value in excess of US\$50,000 on the last day of the taxable year or US\$75,000 at any time during the taxable year are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. “Specified foreign financial assets” include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include the notes) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. Holders who fail to report the required information could be subject to substantial penalties. In addition, the statute of limitations for assessment of tax would be suspended, in whole or part. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in the notes, including the application of the rules to their particular circumstances.



**Additional  
Information**

# List of Exhibits

No.	Description
1.1	Amended Bylaws of Petróleo Brasileiro S.A.-Petrobras, dated as of November 30, 2020.
2.1	Indenture, dated as of December 15, 2006, between Petrobras International Finance Company and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.9 to the Registration Statement of Petrobras and Petrobras International Finance Company on Form F-3, filed with the Securities and Exchange Commission on December 18, 2006 (File Nos. 333-139459 and 333-139459-01)).
2.2	Fourth Supplemental Indenture, dated as of October 30, 2009, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.875% Global Notes due 2040 (incorporated by reference to Exhibit 2.36 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.3	Guaranty for the 6.875% Global Notes due 2040, dated as of October 30, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.38 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.4	Description of Securities.
2.5	Transfer of Rights Agreement, dated as of September 3, 2010, among Petrobras, the Brazilian Federal Government and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to Exhibit 2.47 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 26, 2011 (File Nos. 001-15106 and 001-33121)).
2.6	Tenth Supplemental Indenture, dated as of December 12, 2011, among Petrobras International Finance Company, Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as Principal Paying Agent and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg Paying Agent, relating to the 6.250% Global Notes due 2026 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 12, 2011 (File Nos. 001-15106 and 001-33121)).
2.7	Guaranty for the 6.250% Global Notes due 2026, dated as of December 12, 2011, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 12, 2011 (File Nos. 001-15106 and 001-33121)).
2.8	Further Amended and Restated Deposit Agreement, dated as of January 2, 2020, among Petrobras, JPMorgan Chase Bank, N.A., as depositary, and registered holders and beneficial owners from time to time of the ADSs, representing the common shares of Petrobras, and Form of ADR evidencing ADSs representing the common shares of Petrobras.
2.9	Further Amended and Restated Deposit Agreement, dated as of January 2, 2020, among Petrobras, JPMorgan Chase Bank, N.A., as depositary, and registered holders and beneficial owners from time to time of the ADSs, representing the preferred shares of Petrobras, and Form of ADR evidencing ADSs representing the preferred shares of Petrobras.
2.10	Amended and Restated Seventh Supplemental Indenture, dated as of February 6, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.750% Global Notes due 2041 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)).

2.11	Amended and Restated Guaranty for the 6.750% Global Notes due 2041, dated as of February 6, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)).
2.12	Thirteenth Supplemental Indenture, dated as of February 10, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.60 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.13	Indenture, dated as of August 29, 2012, between Petrobras Global Finance B.V. and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form F-3 of Petrobras, Petrobras International Finance Company and Petrobras Global Finance B.V., filed with the Securities and Exchange Commission on August 29, 2012 (File Nos. 333-183618, 333-183618-01 and 333-183618-02)).
2.14	Second Supplemental Indenture, dated as of October 1, 2012, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 4.25% Global Notes due 2023 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.15	Third Supplemental Indenture, dated as of October 1, 2012, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 5.375% Global Notes due 2029 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.16	Guaranty for the 4.25% Global Notes due 2023, dated as of October 1, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.17	Guaranty for the 5.375% Global Notes due 2029, dated as of October 1, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.18	Sixth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 4.375% Global Notes due 2023 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.19	Seventh Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.625% Global Notes due 2043 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.20	Guaranty for the 4.375% Global Notes due 2023, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.21	Guaranty for the 5.625% Global Notes due 2043, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.22	Production Sharing Agreement, dated as of December 2, 2013, among Petrobras, Shell Brasil Petróleo Ltda., Total E&P do Brasil Ltda., CNODC Brasil Petróleo e Gás Ltda. and CNOOC Petroleum Brasil Ltda., the Brazilian Federal Government, Pré-Sal Petróleo S.A.—PPSA and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to the Annual Report on Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 30, 2014 (File No. 001-15106)).

2.23	Twelfth Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 4.750% Global Notes due 2025 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.24	Thirteenth Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 6.625% Global Notes due 2034 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.25	Guaranty for the 4.750% Global Notes due 2025, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.26	Guaranty for the 6.625% Global Notes due 2034, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.27	Sixteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.250% Global Notes due 2024 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.28	Seventeenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The of New York Mellon, as Trustee, relating to the 7.250% Global Notes due 2044 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.30	Guaranty for the 6.250% Global Notes due 2024, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.31	Guaranty for the 7.250% Global Notes due 2044, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.32	Seventh Supplemental Indenture, dated as of December 28, 2014, among Petrobras International Finance Company S.A., Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)).
2.33	Fourteenth Supplemental Indenture, dated as of December 28, 2014, among Petrobras International Finance Company S.A., Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)).
2.34	First Amendment to the Guaranties, dated as of December 28, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.3 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)).
2.35	Twentieth Supplemental Indenture, dated as of June 5, 2015, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.850% Global Notes due 2115 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)).
2.36	Guaranty for the 6.850% Global Notes due 2115, dated as of June 5, 2015, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)).

2.37	Twenty-Second Supplemental Indenture, dated as of May 23, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.750% Global Notes due 2026 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)).
2.38	Amended and Restated Twenty-Second Supplemental Indenture, dated as of July 13, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.750% Global Notes due 2026 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)).
2.39	Twenty-Fourth Supplemental Indenture, dated as of January 17, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 7.375% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)).
2.40	Guaranty for the 8.750% Global Notes due 2026, dated as of May 23, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)).
2.41	Amended and Restated Guaranty for the 8.750% Global Notes due 2026, dated as of July 13, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)).
2.42	Amended and Restated Guaranty for the 7.375% Global Notes due 2027, dated as of May 22, 2017, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)).
2.43	Amended and Restated Twenty-Fourth Supplemental Indenture, dated as of May 22, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 7.375% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)).
2.44	Amended and Restated Seventeenth Supplemental Indenture, dated as of May 22, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 7.250% Global Notes due 2044 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)).
2.45	Indenture, dated as of September 27, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as trustee, relating to the 5.299% Global Notes due 2025.
2.46	Indenture, dated as of September 27, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as trustee, relating to the 5.999% Global Notes due 2028.
2.47	Guaranty for the 5.299% Global Notes due 2025, dated as of September 27, 2017, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.96 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 27, 2018 (File No. 333-226375)).
2.48	Guaranty for the 5.999% Global Notes due 2028, dated as of September 27, 2017, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.97 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 27, 2018 (File No. 333-226375)).
2.49	Twenty-Fifth Supplemental Indenture, dated as of February 1, 2018, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 5.750% Global Notes due 2029 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on February 1, 2018 (File No. 001-15106)).
2.50	Guaranty for the 5.750% Global Notes due 2029, dated as of February 1, 2018, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on February 1, 2018 (File No. 001-15106)).
2.51	Indenture, dated as of August 28, 2018 between Petrobras and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.3 to the Registration Statement of Petrobras and Petrobras Global Finance on Form F-3, filed with the Securities and Exchange Commission on August 28, 2018 (File Nos. 333-227087 and 333-227087-01)).

2.52	Indenture, dated as of August 28, 2018 between Petrobras Global Finance B.V. and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.4 to the Registration Statement of Petrobras and Petrobras Global Finance B.V. on Form F-3, filed with the Securities and Exchange Commission on August 28, 2018 (File Nos. 333-227087 and 333-227087-01)).
2.53	Amended And Restated Guaranty for the 5.750% Global Notes due 2029, dated as of March 19, 2019, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 19, 2019 (File No. 001-15106).
2.54	Amended And Restated Twenty-Fifth Supplemental Indenture for the 5.750% Global Notes due 2029, dated as of March 19, 2019, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 19, 2019 (File No. 001-15106).
2.55	Guaranty for the 6.90% Global Notes due 2049, dated as of March 19, 2019, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 19, 2019 (File No. 001-15106).
2.56	First Supplemental Indenture for the 6.90% Global Notes due 2049, dated as of March 19, 2019, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.6 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 19, 2019 (File No. 001-15106).
2.57	Amended and Restated Guaranty of the Amended and Restated Guaranty of the 7.250% Global Notes due 2044, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 001-15106)).
2.58	Second Supplemental Indenture for the 5.600% Global Notes due 2031, dated as of June 3, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 3, 2020 (File No. 001-15106).
2.59	Guaranty for the 5.600% Global Notes due 2031, dated as of June 3, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 3, 2020 (File No. 001-15106).
2.60	Third Supplemental Indenture for the 6.750% Global Notes due 2050, dated as of June 3, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 3, 2020 (File No. 001-15106).
2.61	Guaranty for the 6.750% Global Notes due 2050, dated as of June 3, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 3, 2020 (File No. 001-15106).
2.62	Amended and Restated Second Supplemental Indenture for the 5.600% Global Notes due 2031, dated as of October 21, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 21, 2020 (File No. 001-15106).
2.63	Amended and Restated Guaranty for the 5.600% Global Notes due 2031, dated as of October 21, 2020, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 21, 2020 (File No. 001-15106).
2.65	Indenture, dated as of September 18, 2019 between Petrobras Global Finance B.V. and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.75 to the Registration Statement of Petrobras and Petrobras Global Finance B.V. on Form F-4, filed with the Securities and Exchange Commission on July 6, 2020 (as amended on July 28, 2020) (File Nos. 333-239714 and 333-239714-01).
2.66	Guaranty for the 5.093% Global Notes due 2030, dated as of September 18, 2019, between Petrobras and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.73 to Petrobras' Registration Statement on Form F-4, filed with the SEC on July 6, 2020 (as amended on July 28, 2020) (File No. 333-239714).

4.1	Form of Concession Agreement for Exploration, Development and Production of crude oil and natural gas executed between Petrobras and the ANP (incorporated by reference to Exhibit 10.1 of Petrobras' Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)). This was a paper filing, and is not available on the SEC website.
4.2	Purchase and Sale Agreement of natural gas, executed between Petrobras and Yacimientos Petroliferos Fiscales Bolivianos-YPFB (together with and English version) (incorporated by reference to Exhibit 10.2 to Petrobras' Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)). This was a paper filing, and is not available on the SEC website. Until the moment eight GSA Additives have been concluded since its celebration on August 16, 1996, so the GSA remains in force.
8.1	List of Subsidiaries.
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13.1	Certifications Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
15.1	Consent letter of KPMG.
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101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

# Signatures

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The registrant hereby certifies that it meets all the requirements for filing on Form 20-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rio de Janeiro, on March 24, 2021.

Petróleo Brasileiro S.A.—PETROBRAS

By: \_\_\_\_\_

Name: Roberto da Cunha Castello Branco

Title: Chief Executive Officer

By: \_\_\_\_\_

Name: Andrea Marques de Almeida

Title: Chief Financial Officer and Chief Investor Relations  
Officer

# Abbreviations

bbbl	Barrels
bbbl/d	Barrels per day
bcf	Billion cubic feet
bn	Billion (thousand million)
bnbbbl	Billion barrels
bncf	Billion cubic feet
bnm <sup>3</sup>	Billion cubic meters
bnboe	Billion barrels of oil equivalent
boe	Barrels of oil equivalent
boed	Barrels of oil equivalent per day
cf	Cubic feet
GWh	One gigawatt of power supplied or demanded for one hour
km	Kilometer
km <sup>2</sup>	Square kilometers
m <sup>3</sup>	Cubic meter
mbbl	Thousand barrels
mbbl/d	Thousand barrels per day
mboe	Thousand barrels of oil equivalent
mboed	Thousand barrels of oil equivalent per day
mcf	Thousand cubic feet
mcf/d	Thousand cubic feet per day
mm <sup>3</sup>	Thousand cubic meters
mm <sup>3</sup> /d	Thousand cubic meters per day
mm <sup>3</sup> /y	Thousand cubic meter per year
mmbbl	Million barrels
mmbbl/d	Million barrels per day
mmboe	Million barrels of oil equivalent
mmboed	Million barrels of oil equivalent per day
mmcf	Million cubic feet
mmcf/d	Million cubic feet per day
mmm <sup>3</sup>	Million cubic meters
mmm <sup>3</sup> /d	Million cubic meters per day
mmt	Million metric tons
mmt/y	Million metric tons per year
MW	Megawatts
MWavg	Amount of energy (in MWh) divided by the time (in hours) in which such energy is produced or consumed
MWh	One megawatt of power supplied or demanded for one hour
ppm	Parts per million
R\$	Brazilian <i>reais</i>
t	Metric ton
Tcf	Trillion cubic feet
US\$	United States dollars
/d	Per day

## Conversion table

1 acre	=	43,560 square feet	=	0.004047 km <sup>2</sup>
1 barrel	=	42 U.S. gallons	=	Approximately 0.13 t of oil
1 boe	=	1 barrel of crude oil equivalent	=	6,000 cf of natural gas
1 m <sup>3</sup> of natural gas	=	35.315 cf	=	0.0059 boe
1 km	=	0.6214 miles		
1 meter	=	3.2808 feet		
1 t of crude oil	=	1,000 kilograms of crude oil	=	Approximately 7.5 barrels of crude oil (assuming an atmospheric pressure index gravity of 37°API)

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*December 31, 2020, 2019 and 2018*

*with report of independent registered  
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To the Shareholders and Board of Directors

Petróleo Brasileiro S.A. - Petrobras

Rio de Janeiro

## Report of Independent Registered Public Accounting Firm

### ***Opinion on the Consolidated Financial Statements and Internal Control Over Financial Reporting***

We have audited the accompanying consolidated statements of financial position of Petróleo Brasileiro S.A. – Petrobras and subsidiaries (“the Company”) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended December 31, 2020, and the related notes (collectively, the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

### ***Change in Accounting Principle***

As discussed in Note 2.3 to the consolidated financial statements, the Company changed its method of accounting for lease arrangements as of January 1, 2019 due to the adoption of IFRS 16 “Leases”.

### ***Basis for Opinions***

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s consolidated financial statements and an opinion on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of



the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***Definition and Limitations of Internal Control Over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### ***Critical Audit Matters***

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

### ***Assessment of the measurement of the defined benefit obligations for pension and health care plans***

As discussed in notes 4.4 and 19 of the consolidated financial statements, the Company sponsors defined benefit pension and health care plans that provide supplementary retirement benefits to its employees. As of December 31, 2020, the defined benefit obligations for these pension and health care plans were USD 16,069 million. The measurement of the Company's defined benefit obligations with respect to these plans requires the determination of certain actuarial assumptions. These assumptions include the discount rate and projected medical costs. The Company hires external actuarial professionals to assist in the process of determining the actuarial assumptions and the valuation of the defined benefit obligations for its pension and health care plans.

We identified the assessment of the measurement of the defined benefit obligations for the pension and health care plans as a critical audit matter. Subjective auditor judgment was required because minor changes to the discount rates and projected medical costs used to determine the defined benefit obligations can cause significant changes to the measurement of the defined benefit obligations for the pension and health care plans.

The following are the primary procedures we performed to address this critical audit matter:

- we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's process for determining the defined benefit obligations for pension and health care plans. This included controls related to the determination, review and approval of the discount rates and projected medical costs;
- we evaluated the scope of the work, competency, and objectivity of the external actuarial professionals hired by the Company to assist in the process of determining the actuarial assumptions and the measurement of the defined benefit obligations for the pension and health care plans. This included assessing the nature and



scope of the work performed by these external actuarial professionals and their professional qualifications and experience; and

- we involved actuarial professionals with specialized skills and knowledge, who assisted in evaluating the Company's discount rates and projected medical costs including by comparing them to external sources.

#### ***Evaluation of the impairment testing of exploration and production cash generating units ("CGUs")***

As discussed in notes 4.1(b), 4.2, 4.3 and 27 to the consolidated financial statements, for the purposes of impairment testing, the Company identifies its cash generating units ("CGUs"), estimates the recoverable amount of these CGUs and compares the recoverable amount with the carrying amount of these CGUs. The carrying amount of the exploration and production CGUs as of December 31, 2020 was USD 42,421 million. For the year ended December 31, 2020, the amount of impairment loss recognized in relation to the exploration and production CGUs was USD 7,316 million.

We identified the evaluation of the impairment testing of exploration and production CGUs as a critical audit matter. A high degree of complexity and subjectivity of auditor judgment was involved in evaluating the Company's definition of these CGUs and the estimate of the recoverable amount. The definition of exploration and production CGUs requires auditor judgment in the consideration of operational factors that impact the interdependencies between oil and gas assets. These interdependencies alter the aggregation or segregation of the oil and gas assets into CGUs. The expected future cash flows used to determine the recoverable amount depend on certain assumptions about the future including average Brent oil price; exchange rate; capital and operating expenditure and volume and timing of recovery of the oil and gas reserves. The recoverable amount is also sensitive to minor changes in the discount rate. The assessment of these assumptions required significant auditor judgment.

The following are the primary procedures we performed to address this critical audit matter:

- we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's impairment assessment process. These included controls related to the review and approval of the Company's determination of the CGUs and of the key assumptions used to estimate the recoverable amount;
- for changes in exploration and production CGUs during the year, we assessed the operational factors considered by the Company when defining these changes by comparing to information obtained from internal and external sources;
- we evaluated the Company's projected recovery of oil and gas reserves by comparing it with estimated volumes certified by an external reservoir specialist hired by the Company and, for a selection of CGUs, with historical production;
- we evaluated the scope of the work, competency, and objectivity of the external reservoir specialists hired by the Company that certified the estimated reserve volumes. This included assessing the nature and scope of the work they were engaged to perform and their professional qualifications and experience;
- we evaluated, for a selection of CGUs, the Company's projected future capital and operating expenditures by comparing these projections with the latest approved business and management plan and long-term budgets;
- we evaluated the Company's ability to accurately project cash flows by comparing, for a selection of CGUs, the prior years' estimated cash flows for the year ended December 31, 2020 with actual cash flows in this year; and
- in addition, we involved a valuation professional with specialized skill and knowledge, who assisted in evaluating certain assumptions used in the impairment testing such as the discount rates, average Brent oil prices and the exchange rates by comparing them against available external market data.

#### ***Evaluation of provisions and disclosures for certain specific labor, civil and tax lawsuits***

As discussed in notes 4.5 and 20 to the consolidated financial statements, the Company is involved in labor, civil and tax lawsuits during the normal course of its activities. The Company records provisions for these lawsuits when it is probable that an outflow of resource embodying economic benefits will be required to settle a present



obligation and when the outflow can be reasonably estimated. The Company discloses a contingent liability whenever the likelihood of an outflow to settle a present obligation is considered possible, or when the likelihood is considered probable, but it is not possible to reasonably estimate the amount of the outflow.

We identified the evaluation of the provisions and / or disclosures for certain specific labor, civil and tax lawsuits as a critical audit matter. Challenging auditor judgment and effort was required due to the subjective nature of the estimates and assumptions. Specifically, judgments about the likelihood of an outflow and estimates of the amounts of outflows.

The following are the primary procedures we performed to address this critical audit matter:

- we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's evaluation of lawsuits. These included controls related to the review and approval of the determination of the likelihood of an outflow to settle a present obligation and the estimate of amounts of outflows, as well as over the financial statement disclosures;
- we evaluated the scope of work, competency, and objectivity of the internal and external legal counsel that determined the likelihood of an outflow to settle a present obligation and the estimate of the amounts of outflows. This included assessing the nature and scope of the work performed by the internal and external legal counsel and their professional qualifications and experience;
- we obtained and evaluated letters received directly from the Company's external legal counsel that included an assessment of the likelihood of loss and the estimate of the amounts of outflows. For certain specific legal proceedings, we compared these assessments and estimates to those used by the Company and evaluated the sufficiency of the Company's legal contingency disclosures; and
- we evaluated the Company's ability to accurately estimate amounts to be paid related to labor, civil and tax lawsuits by comparing the amounts paid upon resolution of legal proceedings during the year to the provision amounts as of the prior year end.

#### ***Evaluation of the estimate of the provision for decommissioning costs***

As discussed in notes 4.1(c), 4.6 and 21 to the consolidated financial statements the Company records a provision for decommissioning costs which reflects its obligations to restore the environment and dismantle and remove oil and gas production facilities upon abandonment. As of December 31, 2020, the carrying amount of provision for decommissioning costs was USD18,780 million. The Company's estimate of the provision for decommissioning costs includes assumptions in relation to the nature and extent of the environmental restoration and the dismantlement and removal work as well as the cost and timing of this work.

We identified the evaluation of the estimate of the provision for decommissioning costs as a critical audit matter. Subjective auditor judgment was necessary to evaluate the key assumptions used in the estimate such as the extent of the decommissioning work that will be required by contract and regulations, the criteria to be met when the decommissioning actually occurs and the costs and related timing of the future payments that will be incurred in the decommissioning process.

The following are the primary procedures we performed to address this critical audit matter:

- we evaluated the design and tested the operating effectiveness of certain internal controls over the Company's process to estimate the provision for decommissioning costs. This included controls related to the determination, review and approval of the key assumptions, including estimates of the timing of abandonment and estimated costs of decommissioning;
- we assessed the estimates of timing until abandonment used by the Company, by comparing the production curves and life of the oil and gas reserves used with estimated reserve volumes certified by external reservoir specialists hired by the Company;
- we assessed the estimated costs of decommissioning by comparing certain key assumptions with external industry reports;



- we evaluated the scope of the work, competency, and objectivity of the internal engineers that estimated the production curves and life of the oil and gas reserves and the external reservoir specialists hired by the Company that certified the estimated reserve volumes. This included assessing the nature and scope of the work they were engaged to perform and their professional qualifications and experience;
- we evaluated the Company's ability to accurately forecast costs of decommissioning work, by comparing a selection of actual expenditure incurred with the decommissioning of oil and gas production facilities during the year to the Company's forecasts of that expenditure in the prior year.

/s/ KPMG Auditores Independentes

We have served as the Company's auditor since 2017.

KPMG Auditores Independentes  
Rio de Janeiro – Brazil  
March 24, 2021

## **Petróleo Brasileiro S.A. – Petrobras**

### Management Report on Internal Control over Financial Reporting

#### **Management’s Report on Internal Control over Financial Reporting**

Our management is responsible for establishing, adequately maintaining and assessing the effectiveness of internal control over financial reporting. Such internal control is a process designed by, or under the supervision of our CEO and CFO, and effected by our board of directors, management and other employees.

The internal control over financial reporting is designed to provide reasonable assurances regarding the reliability of financial reporting and of the preparation of our consolidated financial statements for external purposes, in accordance with IFRS, as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk of becoming inadequate because of changes in its conditions and assumptions.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2020 based on the criteria established in “Internal Controls – Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of Treadway Commission (“COSO”). Our management has concluded that our internal control over financial reporting was effective.

Roberto Castello Branco  
Chief Executive Officer

Andrea Marques de Almeida  
Chief Financial Officer

**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**
**PETROBRAS**

December 31, 2020 and December 31, 2019 (Expressed in millions of US Dollars, unless otherwise indicated)

<b>Assets</b>	<b>Note</b>	<b>12.31.2020</b>	<b>12.31.2019</b>	<b>Liabilities</b>	<b>Note</b>	<b>12.31.2020</b>	<b>12.31.2019</b>
<b>Current assets</b>				<b>Current liabilities</b>			
Cash and cash equivalents	4.1	11,711	7,372	Trade payables	16	6,859	5,601
Marketable securities	4.2	659	888	Finance debt	34.1	4,186	4,469
Trade and other receivables	14.1	4,731	3,762	Lease liability	35	5,698	5,737
Inventories	15	5,677	8,189	Income taxes payable	17.1	198	276
Recoverable income taxes	17.1	418	2,493	Other taxes payable	17.1	2,636	3,424
Other recoverable taxes	17.1	2,177	1,051	Dividends payable	36.5	858	1,558
Others	22	1,230	1,493	Short-term employee benefits	18	1,953	1,645
		26,603	25,248	Pension and medical benefits	19	1,549	887
Assets classified as held for sale	32	785	2,564	Others	22	1,603	1,973
		27,388	27,812			25,540	25,570
				Liabilities related to assets classified as held for sale	32	685	3,246
						26,225	28,816
<b>Non-current assets</b>				<b>Non-current liabilities</b>			
Long-term receivables				Finance debt	34.1	49,702	58,791
Trade and other receivables	14.1	2,631	2,567	Lease liability	35	15,952	18,124
Marketable securities	8.2	44	58	Income taxes payable	17.1	357	504
Judicial deposits	20.2	7,281	8,236	Deferred income taxes	17.4	195	1,760
Deferred income taxes	12.4	6,451	1,388	Pension and medical benefits	19	14,520	25,607
Other recoverable taxes	17.1	3,158	3,939	Provisions for legal proceedings	20.1	2,199	3,113
Others	22	635	1,503	Provision for decommissioning costs	21	18,780	17,460
		20,200	17,691	Others	22	2,204	1,350
						103,909	126,709
				Total liabilities		130,134	155,525
				<b>Equity</b>			
Investments	31	3,273	5,499	Share capital (net of share issuance costs)	36.1	107,101	107,101
Property, plant and equipment	25	124,201	159,265	Capital reserve and capital transactions		1,064	1,064
Intangible assets	26	14,948	19,473	Profit reserves		65,917	65,627
		162,622	201,928	Accumulated other comprehensive (deficit)		(114,734)	(100,469)
				Attributable to the shareholders of Petrobras		59,348	73,323
				Non-controlling interests	31.5	528	892
						59,876	74,215
<b>Total assets</b>		<b>190,010</b>	<b>229,740</b>	<b>Total liabilities and equity</b>		<b>190,010</b>	<b>229,740</b>

The notes form an integral part of these financial statements.

**CONSOLIDATED STATEMENTS OF INCOME**
**PETROBRAS**

Years ending December 31, 2020, 2019 and 2018 (Expressed in millions of US Dollars, unless otherwise indicated)

	Note	2020	2019	2018
Sales revenues	9	53,683	76,589	84,638
Cost of sales	10.1	(29,195)	(45,732)	(52,184)
Gross profit		24,488	30,857	32,454
Income (expenses)				
Selling expenses	10.2	(4,884)	(4,476)	(3,827)
General and administrative expenses	10.3	(1,090)	(2,124)	(2,239)
Exploration costs	28	(803)	(799)	(524)
Research and development expenses		(355)	(576)	(641)
Other taxes		(952)	(619)	(670)
Impairment of assets	27	(7,339)	(2,848)	(2,005)
Other income and expenses	11	998	1,199	(5,760)
		(14,425)	(10,243)	(15,666)
Income (loss) before finance expense, results of equity-accounted investments and income taxes		10,063	20,614	16,788
Finance income		551	1,330	2,381
Finance expenses		(6,004)	(7,086)	(5,675)
Foreign exchange gains (losses) and inflation indexation charges		(4,177)	(3,008)	(3,190)
Net finance expense	12	(9,630)	(8,764)	(6,484)
Results of equity-accounted investments	31.3	(659)	153	523
Net income (loss) before income taxes		(226)	12,003	10,827
Income taxes	17.3	1,174	(4,200)	(4,256)
<b>Net income from continuing operations for the year</b>		948	7,803	6,571
<b>Net income from discontinued operations for the year</b>		-	2,560	843
<b>Net income for the year</b>		948	10,363	7,414
Net income attributable to shareholders of Petrobras		1,141	10,151	7,173
Net income from continuing operations		1,141	7,660	6,572
Net income from discontinued operations		-	2,491	601
Non-controlling interests		(193)	212	241
Net income (loss) from continuing operations		(193)	143	(1)
Net income from discontinued operations		-	69	242
Basic and diluted earnings per common and preferred share - in U.S. dollars	36.6	0.09	0.78	0.55

The notes form an integral part of these financial statements.

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME****PETROBRAS**

Years ending December 31, 2020, 2019 and 2018 (Expressed in millions of US Dollars, unless otherwise indicated)

	2020	2019	2018
Net income for the year	948	10,363	7,414
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on post-employment defined benefit plans			
Recognized in equity	2,415	(5,589)	(3,130)
Deferred income tax	(127)	1,491	(119)
	2,288	(4,098)	(3,249)
Unrealized gains (losses) on equity instruments measured at fair value through other comprehensive income			
Recognized in equity	(2)	-	(5)
Deferred income tax	1	-	2
	(1)	-	(3)
Share of other comprehensive income (losses) in equity-accounted investments	46	-	-
Items that may be reclassified subsequently to the statement of income:			
Unrealized gains (losses) on cash flow hedge - highly probable future exports			
Recognized in equity	(21,460)	(3,510)	(8,950)
Reclassified to the statement of income	4,720	3,136	3,315
Deferred income tax	5,690	126	1,916
	(11,050)	(248)	(3,719)
Cumulative translation adjustments (*)			
Recognized in equity	(5,211)	(1,465)	(6,409)
Reclassified to the statement of income	-	34	-
	(5,211)	(1,431)	(6,409)
Share of other comprehensive income in equity-accounted investments			
Recognized in equity	(378)	69	(135)
Reclassified to the statement of income	43	-	-
	(335)	69	(135)
Total other comprehensive income (loss)	(14,263)	(5,708)	(13,515)
<b>Total comprehensive income (loss)</b>	<b>(13,315)</b>	<b>4,655</b>	<b>(6,101)</b>
Comprehensive income (loss) attributable to non-controlling interests	(189)	186	65
<b>Comprehensive income (loss) attributable to shareholders of Petrobras</b>	<b>(13,126)</b>	<b>4,469</b>	<b>(6,166)</b>

(\*) It includes US\$ 804 loss (US\$ 132 loss in 2019 and US\$ 236 loss in 2018), of cumulative translation adjustments in associates and joint ventures.

The notes form an integral part of these financial statements.

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**PETROBRAS**

Years ending December 31, 2020, 2019 and 2018 (Expressed in millions of US Dollars, unless otherwise indicated)

	2020	2019	2018
<b>Cash flows from operating activities</b>			
Net income (loss) for the year	948	10,363	7,414
Adjustments for:			
Net income from discontinued operations	–	(2,560)	(843)
Pension and medical benefits (actuarial expense)	(1,001)	2,086	2,018
Results of equity-accounted investments	659	(153)	(523)
Depreciation, depletion and amortization	11,445	14,836	11,912
Impairment of assets (reversal)	7,339	2,848	2,005
Allowance (reversals) for credit loss on trade and other receivables	144	87	91
Exploratory expenditure write-offs	456	308	87
Foreign exchange, indexation and finance charges	11,094	8,460	7,941
Deferred income taxes, net	(1,743)	2,798	370
Revision and unwinding of discount on the provision for decommissioning costs	981	950	31
Inventory write-down (write-back) to net realizable value	375	15	421
PIS and COFINS recovery - exclusion of ICMS (VAT tax) from the basis of calculation	(3,173)	–	–
Disposal/write-offs of assets, remeasurement of investment retained with loss of control and reclassification of CTA	(456)	(6,012)	(416)
Early termination and cash outflows revision of lease agreements	(276)	(60)	–
Decrease (Increase) in assets			
Trade and other receivables, net	1	2,233	(1,535)
Inventories	724	(281)	(2,108)
Judicial deposits	(859)	(2,144)	(2,040)
Escrow account - Class action agreement	–	1,819	(2,019)
Other assets	159	(219)	461
Increase (Decrease) in liabilities			
Trade payables	216	(989)	858
Other taxes payable	3,246	225	2,265
Pension and medical benefits	(1,048)	(1,882)	(1,002)
Provisions for legal proceedings	(261)	(3,767)	1,686
Short-term benefits	781	185	529
Provision for decommissioning costs	(482)	(512)	(500)
Agreement with US authorities	–	(768)	(85)
Other liabilities	(47)	(259)	996
Income taxes paid	(332)	(2,330)	(2,567)
<b>Net cash provided by operating activities from continuing operations</b>	<b>28,890</b>	<b>25,277</b>	<b>25,447</b>
Net cash provided by operating activities - discontinued operations	–	323	906
<b>Net cash provided by operating activities</b>	<b>28,890</b>	<b>25,600</b>	<b>26,353</b>
<b>Cash flows from investing activities</b>			
Acquisition of PP&E and intangibles assets (except for the Bidding for oil surplus of Transfer of rights agreement)	(5,874)	(8,556)	(11,905)
Bidding for oil surplus of Transfer of rights agreement	–	(15,341)	–
Investments in investees	(942)	(7)	(44)
Proceeds from disposal of assets - Divestment	1,997	10,413	5,791
Reimbursement on the Transfer of rights agreement	–	8,361	–
Divestment (Investment) in marketable securities	66	198	704
Dividends received	243	1,436	994
<b>Net cash used in investing activities from continuing operations</b>	<b>(4,510)</b>	<b>(3,496)</b>	<b>(4,460)</b>
Net cash used in investing activities - discontinued operations	–	1,812	(44)
<b>Net cash used in investing activities</b>	<b>(4,510)</b>	<b>(1,684)</b>	<b>(4,504)</b>
<b>Cash flows from financing activities</b>			
Investments by non-controlling interest	(67)	(29)	43
Proceeds from financing	17,023	7,464	10,707
Repayment of principal - finance debt	(25,727)	(27,273)	(34,013)
Repayment of interest - finance debt	(3,157)	(4,501)	(5,703)
Repayment of lease liability	(5,880)	(5,207)	–
Dividends paid to Shareholders of Petrobras	(1,367)	(1,877)	(625)
Dividends paid to non-controlling interests	(84)	(138)	(103)
<b>Net cash used in financing activities from continuing operations</b>	<b>(19,259)</b>	<b>(31,561)</b>	<b>(29,694)</b>
Net cash used in financing activities - discontinued operations	–	(508)	(156)
<b>Net cash used in financing activities</b>	<b>(19,259)</b>	<b>(32,069)</b>	<b>(29,850)</b>
Effect of exchange rate changes on cash and cash equivalents	(773)	1,631	(619)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>4,348</b>	<b>(6,522)</b>	<b>(8,620)</b>
<b>Cash and cash equivalents at the beginning of the period</b>	<b>7,377</b>	<b>13,899</b>	<b>22,519</b>
<b>Cash and cash equivalents at the end of the period</b>	<b>11,725</b>	<b>7,377</b>	<b>13,899</b>

The notes form an integral part of these financial statements.

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**
**PETROBRAS**

Years ending December 31, 2020, 2019 and 2018 (Expressed in millions of US Dollars, unless otherwise indicated)

	Share capital (net of share issuance costs)			Accumulated other comprehensive income (deficit) and deemed cost				Profit Reserves									Total consolidated equity
	Share Capital	Share issuance costs	Capital reserve, Capital Transactions and Treasury shares	Cumulative translation adjustment	Cash flow hedge - highly probable future exports	Actuarial gains (losses) on defined benefit pension plans	Other comprehensive income (loss) and deemed cost	Legal	Statutory	Tax incentives	Profit retention	Additional dividends proposed	Retained earnings (losses)	Equity attributable to shareholders of Petrobras	Non-controlling interests		
<b>Balance at January 1, 2018</b>	107,380	(279)	1,067	(61,043)	(9,573)	(10,015)	(811)	7,919	2,182	720	42,235	-	(222)	79,560	1,685	81,245	
		107,101	1,067				(81,442)					53,056	(222)	79,560	1,685	81,245	
Realization of deemed cost	-	-	-	-	-	-	(4)	-	-	-	-	-	4	-	-	-	
Treasury shares	-	-	(2)	-	-	-	-	-	-	-	-	-	-	(2)	-	(2)	
Capital transactions	-	-	2	-	-	-	-	-	-	-	-	-	-	2	115	117	
Net income	-	-	-	-	-	-	-	-	-	-	-	-	7,173	7,173	241	7,414	
Other comprehensive income	-	-	-	(6,273)	(3,719)	(3,209)	(138)	-	-	-	-	-	-	(13,339)	(176)	(13,515)	
Appropriations:																	
Transfer to reserves	-	-	-	-	-	-	-	338	270	203	4,294	-	(5,105)	-	-	-	
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	(1,850)	(1,850)	(234)	(2,084)	
<b>Balance at December 31, 2018</b>	107,380	(279)	1,067	(67,316)	(13,292)	(13,224)	(953)	8,257	2,452	923	46,529	-	-	71,544	1,631	73,175	
		107,101	1,067				(94,785)					58,161	-	71,544	1,631	73,175	
Realization of deemed cost	-	-	-	-	-	-	(2)	-	-	-	-	-	2	-	-	-	
Treasury shares	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Capital transactions	-	-	(3)	-	-	-	-	-	-	-	-	-	-	(3)	(658)	(661)	
Net income	-	-	-	-	-	-	-	-	-	-	-	-	10,151	10,151	212	10,363	
Other comprehensive income	-	-	-	(1,405)	(248)	(4,098)	69	-	-	-	-	-	-	(5,682)	(26)	(5,708)	
Appropriations:																	
Transfer to reserves	-	-	-	-	-	-	-	488	250	179	6,549	-	(7,466)	-	-	-	
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	(2,687)	(2,687)	(267)	(2,954)	
<b>Balance at December 31, 2019</b>	107,380	(279)	1,064	(68,721)	(13,540)	(17,322)	(886)	8,745	2,702	1,102	53,078	-	-	73,323	892	74,215	
		107,101	1,064				(100,469)					65,627	-	73,323	892	74,215	
Capital increase with reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(13)	(13)	
Realization of deemed cost	-	-	-	-	-	-	2	-	-	-	-	-	(2)	-	-	-	
Capital transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(81)	(81)	
Net income	-	-	-	-	-	-	-	-	-	-	-	-	1,141	1,141	(193)	948	
Other comprehensive income (loss)	-	-	-	(5,215)	(11,050)	2,288	(290)	-	-	-	-	-	-	(14,267)	4	(14,263)	
Appropriations:																	
Transfer to reserves	-	-	-	-	-	-	-	68	198	-	(226)	-	(40)	-	-	-	
Dividends	-	-	-	-	-	-	-	-	-	-	(878)	1,128	(1,099)	(849)	(81)	(930)	
<b>Balance at December 31, 2020</b>	107,380	(279)	1,064	(73,936)	(24,590)	(15,034)	(1,174)	8,813	2,900	1,102	51,974	1,128	-	59,348	528	59,876	
		107,101	1,064				(114,734)					65,917	-	59,348	528	59,876	

The notes form an integral part of these financial statements.

## 1. The Company and its operations

Petróleo Brasileiro S.A. (Petrobras), hereinafter referred to as “Petrobras” or “Company,” is a partially state-owned enterprise, controlled by the Brazilian Federal Government, of indefinite duration, governed by the terms and conditions under the Brazilian Corporate Law (Law 6,404 of December 15, 1976), Law 13,303 of June 30, 2016 and its Bylaws.

Petrobras’ shares are listed on the Brazilian stock exchange (B3) in the Level 2 Corporate Governance special listing segment and, therefore, the Company, its shareholders, its managers and fiscal council members are subject to provisions under its regulation (Level 2 Regulation - *Regulamento de Listagem do Nível 2 de Governança Corporativa da Brasil Bolsa Balcão* – B3). The provisions of the Level 2 Regulation, which are based on high standards of corporate governance, shall prevail over statutory provisions in the event of harm to the rights of public offers investors provided for in the Company's Bylaws, except when otherwise determined by other regulation. On February 13, 2020, as requested, Petrobras had its disassociation from the B3 State-Owned Governance Program approved.

The Company is dedicated to prospecting, drilling, refining, processing, trading and transporting crude oil from producing onshore and offshore oil fields and from shale or other rocks, as well as oil products, natural gas and other liquid hydrocarbons. In addition, Petrobras carries out energy related activities, such as research, development, production, transport, distribution and trading of all forms of energy, as well as other related or similar activities.

Petrobras may perform any of the activities related to its corporate purpose, directly, through its wholly-owned subsidiaries, controlled companies, alone or through joint ventures with third parties, in Brazil or abroad.

The economic activities linked to its business purpose shall be undertaken by the Company in free competition with other companies according to market conditions, in compliance with the other principles and guidelines of Laws no. 9,478/97 and 10,438/02 (oil & gas and electricity sector regulations, respectively). However, Petrobras may have its activities, provided they are in compliance with its corporate purpose, guided by the Brazilian Federal Government to contribute to the public interest that justified its creation, aiming to meet national energy policy objectives when:

I – established by law or regulation, as well as under agreements provisions with a public entity that is competent to establish such obligation, abiding with the broad publicly stated of such instruments; and

II – the cost and revenues thereof have been broken down and disseminated in a transparent manner.

In this case, the Company’s Investment Committee and Minority Shareholders Committee, exercising their advisory role to the Board of Directors, shall assess and measure the difference between such market conditions and the operating result or economic return of the transaction, based on technical and economic criteria for investment valuation and specific operating costs and results under the Company's operations. In case a difference is identified, for every financial year, the Brazilian Federal Government shall compensate the Company.

## **2. Basis of preparation**

### **2.1. Statement of compliance and authorization of consolidated financial statements**

These consolidated financial statements have been prepared and are being presented in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The consolidated financial statements have been prepared under the historical cost convention, except when otherwise indicated. The significant accounting policies used in the preparation of these financial statements are set out in their respective explanatory notes.

The preparation of the financial statements requires the use of estimates based on assumptions and judgements, which may affect the application of accounting policies and reported amounts of assets, liabilities, revenues and expenses. Although our management periodically reviews these assumptions and judgments, the actual results could differ from these estimates. For further information on accounting estimates, see note 4.

These consolidated financial statements were approved and authorized for issue by the Company's Board of Directors in a meeting held on March 24, 2021.

### **2.2. Discontinued operation**

After the additional sale of the Company's interest in the subsidiary Petrobras Distribuidora (BR), carried out through a secondary public offering (follow-on) in July 2019, Petrobras is no longer the controlling shareholder of BR.

Furthermore, all requirements were met to classify this investment as a discontinued operation, in accordance with IFRS 5 - Non-current Assets Held for Sale and Discontinued Operations, since it represented a separate major line of business. Thus, in the consolidated statement of income and cash flows, the net income, operating, investing and financing cash flows relating to BR are presented in separate line items, as a net amount for discontinued operations.

### **2.3. Initial adoption of new accounting standard**

On January 1, 2019, the Company adopted IFRS 16 – Leases. Among the changes arising from IFRS 16, this standard eliminated the classification of leases as either operating or finance leases for lessees, providing for a single lessee accounting model in which all leases result in the recognition of a right-of-use asset and a lease liability.

Following the adoption of IFRS 16, lease payments under operating leases are not charged to the statement of income as a single expense item on an accrual basis. Instead, depreciation of the right to use a leased asset, as well as the finance expenses and foreign exchange gains or losses over the lease liability, are recognized in the statement of income.

In the statement of cash flows, the lease payments previously presented within operating and investing activities are presented as financing activities, comprising the settlement of lease liabilities. However, such change does not affect the Company's cash and cash equivalents balance.

### **2.4. Functional and presentation currency**

The functional currency of Petrobras and all of its Brazilian subsidiaries is the Brazilian Real. The functional currency of the Petrobras direct subsidiaries that operate outside Brazil is the U.S. dollar.

Petrobras has selected the U.S. dollar as its presentation currency to facilitate a more direct comparison to other oil and gas companies. The financial statements have been translated from the functional currency (Brazilian real) into the presentation currency (U.S. dollar). All assets and liabilities are translated into U.S. dollars at the closing exchange rate at the date of the financial statements; income and expenses, as well as cash flows are translated into U.S. dollars using the average exchange rates prevailing during the period. All exchange differences arising from the translation of the consolidated financial statements from the functional currency into the presentation currency are recognized as cumulative translation adjustments (CTA) within accumulated other comprehensive income in the consolidated statements of changes in shareholders' equity.

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Quarterly average exchange rate	5.39	5.38	5.39	4.47	4.12	3.97	3.92	3.77	3.81	3.95	3.61	3.24
Period-end exchange rate	5.20	5.64	5.48	5.20	4.03	4.16	3.83	3.90	3.87	4.00	3.86	3.32

## 2.5. Order of presentation of the explanatory notes

As recommended in the Conceptual Framework for Financial Reporting, the expectations of users of financial statements regarding the Company's returns depend on their assessment of the amount, timing and uncertainty of (the prospects for) future net cash inflows to the entity and on their assessment of management's stewardships of the entity's economic resources.

Therefore, the order of the explanatory notes align the Company's financial statements with the users' view, in addition to emphasizing the importance of the Company's Strategic Management.

Thus, after the explanatory notes presenting the Company and its operations, and those related to the conceptual structure applied in the preparation of the financial statements, it proceeds with the explanatory note on Capital Management, followed by the other notes, separated by the activities as set out on the statement of cash flows.

## 3. Significant accounting policies

The significant accounting policies used in the preparation of the annual financial statements of the Company, for the year ended December 31, 2020, are consistent with those adopted and disclosed in the financial statements of the previous years. To aid cohesion and comprehension, the accounting policies are set out at the end of each explanatory note.

## 4. Critical accounting policies: key estimates and judgments

The preparation of the consolidated financial information requires the use of estimates and judgments for certain transactions and their impacts on assets, liabilities, income and expenses. The assumptions are based on past transactions and other relevant information and are periodically reviewed by management, although the actual results could differ from these estimates.

The impacts of COVID-19 and its effects over economic environment were considered in the preparation of these financial statements and the results of the revision of assumptions are presented in note 6.

Information about areas that require significant judgment or involve a higher degree of complexity in the application of the accounting policies and that could materially affect the Company's financial condition and results of operations is set out as follows.

### 4.1. Oil and gas reserves

Oil and gas reserves are estimated based on economic, geological and engineering information, such as well logs, pressure data and fluid sample data. The reserves are used as the basis for calculating unit-of-production depreciation, depletion and amortization rates, impairment testing and decommissioning costs estimates, and for projections of highly probable future exports subject to the cash flow hedge.

Reserves estimates are revised at least annually, based on updated geological and production data of reservoirs, as well as on changes in prices and costs used in these estimates. Revisions can also result from significant changes in the Company's development strategy or in the production capacity.

The Company determines its oil and gas reserves both pursuant to the U.S. Securities and Exchange Commission - SEC and the ANP/SPE (Brazilian Agency of Petroleum, Natural Gas and Biofuels / Society of Petroleum Engineers) criteria. The main differences between these criteria relate to the use of different economic premises and to the possibility, under the ANP/SPE criteria, to include volumes expected to be produced after the expiration of contracts related to the Brazilian fields, according to the ANP criteria.

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According to the definitions prescribed by the SEC, proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscientific 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, operating methods and government regulation. Proved reserves are subdivided into developed and undeveloped reserves.

Proved developed oil and gas reserves are those that can be expected to be recovered through: (i) existing wells with existing equipment and operating methods, where the cost of the required equipment is relatively minor compared to the cost of a new well; (ii) installed extraction equipment and infrastructure operational at the time of the reserves estimate, if the extraction is by means not involving wells.

Although the Company is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, regulatory aspects and significant changes in long-term oil and gas price levels.

Detailed information on reserves is presented as unaudited supplementary information.

### **a) Impacts of oil and gas reserves on depreciation, depletion and amortization**

Estimates of proved reserves volumes used in the calculation of depreciation, depletion and amortization rates, under the unit-of-production method, are prepared by the Company's technicians according to SEC definitions. Revisions to the Company's proved developed and undeveloped reserves impact prospectively the amounts of depreciation, depletion and amortization recognized in the statement of income and the carrying amounts of oil and gas properties assets.

Therefore, considering all other variables being constant, a decrease in estimated proved reserves would increase, prospectively, depreciation, depletion and amortization expense, while an increase in reserves would reduce depreciation, depletion and amortization.

Note 25.3 provides more detailed information on depreciation, amortization and depletion.

### **b) Impacts of oil and gas reserves on impairment testing**

The measurement of the value in use of oil and gas exploration and development assets is based on proved and probable reserves pursuant to the ANP/SPE definitions. Note 25.3 provides further information on impairment testing.

### **c) Impacts of oil and gas reserves on decommissioning costs estimates**

The timing of abandonment and dismantling areas is based on the length of reserves depletion, in accordance with ANP/SPE definitions. Therefore, the review of the timing of reserves depletion may impact the provision for decommissioning cost estimates. Note 4.6 provides further information on other assumptions used in estimating the provision for decommissioning costs.

### **d) Impacts of oil and gas reserves on highly probable future exports subject to cash flow hedge accounting**

The Company estimates highly probable future exports in accordance with future exports forecasted in the current Strategic Plan projections. Changes in the expected oil and gas production may affect future exports forecasts and, consequently, hedge relationship designations may also be impacted.

## **4.2. Main assumptions for impairment testing**

Impairment testing involves uncertainties mainly related to its key assumptions: average Brent prices and Brazilian Real/U.S. dollar average exchange rate. These assumptions are relevant to virtually all of the Company's operating segments and a significant number of interdependent variables are derived from these key assumptions and there is a high degree of complexity in their application in determining value in use for impairment tests.

The markets for crude oil and natural gas have a history of significant price volatility and although prices can drop precipitously, industry prices over the long term tends to continue being driven by market supply and demand fundamentals.

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Projections relating to the key assumptions are derived from the Strategic Plan and are consistent with market evidence, such as independent macro-economic forecasts, industry analysts and experts. Back testing analysis and feedback process in order to continually improve forecast techniques are also performed.

The Company's oil price forecast model is based on a nonlinear relationship between variables reflecting market supply and demand fundamentals. This model also takes into account other relevant factors, such as the effects of OPEC decisions on the oil market, industry costs, idle capacity, the oil and gas production forecasted by specialized firms, the relationship between the oil price and the U.S. dollar exchange rate.

The Real/U.S. dollar exchange rate projections are based on econometric models that take into account long-term assumptions involving observable inputs, such as country risk, commodity prices, interest rates and the value of the U.S. Dollar relative to a basket of foreign currencies (U.S. Dollar Index – USDIX).

Changes in the economic environment may result in changing assumptions and, consequently, the recognition of impairment charges or reversals on certain assets or CGUs. For example, the Brent price directly impacts the Company's sales revenue and refining margins, while the Brazilian Real/U.S. dollar exchange rate mainly impacts our capital and operating expenditures.

Changes in the economic and political environment may also result in higher country risk projections that would increase discount rates for impairment testing.

In addition, changes in reserve volumes, production curve expectations and lifting costs could trigger the need for impairment assessment, as well as capital expenditure decisions, which are also affected by the Company's plan to reduce its leverage, may result in postponement or termination of projects, reducing their economic feasibility.

The recoverable amount of certain assets may not substantially exceed their carrying amounts and, therefore, it is reasonably possible that outcomes in future periods that are different from the current assumptions may result in the recognition of additional impairment charges on these assets, as described in note 27.1.5.

### 4.3. Identifying cash-generating units for impairment testing

Identifying cash-generating units (CGUs) requires management assumptions and judgment, based on the Company's business and management model. Changes in the aggregation of assets into CGUs may occur due to a review of investment, strategic or operational factors, which could result in changes in the interdependencies between those assets and, consequently, alter the aggregation or breakdown of assets into CGUs or individual assets. Therefore, this change could result in additional impairment charges or reversals. The primary considerations in relation to identifying the CGUs are set out below:

#### a) Exploration and Production CGUs:

i) Crude oil and natural gas producing properties CGUs: comprises exploration and development assets related to crude oil and natural gas fields and groups of fields in Brazil and abroad. At December 31, 2020, Exploration and Production CGUs had 132 fields and 30 groups of fields. Changes in the aggregation of CGUs are presented in note 27.

ii) Drilling rigs are not part of any CGU and are assessed for impairment separately.

#### b) Refining, transportation and marketing CGUs:

i) Downstream CGU: comprises refineries and associated assets, terminals and pipelines, as well as logistics assets operated by Transpetro, with a combined and centralized operation of logistical and refining assets in Brazil. These assets are managed with a common goal of achieving efficiency, profitability and strategic value long term on a nationwide basis. They are not operated for the generation of profit by asset/location. The operational planning is made in a centralized manner and these assets are not managed, measured or evaluated by their individual results. The refineries do not have autonomy to choose the oil to be processed, the mix of oil products to produce, the markets in which these products will be traded, which amounts will be exported, which intermediaries will be received and to decide the sale prices of oil products. The operational decisions are analyzed through an integrated model of operational planning for market supply. This model evaluates the solutions to supply the market considering all the options for production, importing, exporting, logistics and inventories seeking a comprehensive optimum for Petrobras and not for the profit of each unit. The decision regarding a new investment is not based on the profitability of the project for the asset where it will be installed, but for Petrobras as a whole. The model that supports the

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entire planning, used in the studies of technical and economic feasibility of new investments in refining, may, in its indications, allocate a lower economic kind of oil to a certain refinery or define a lower economic mix of products to it, or even force it to supply more distant markets (area of influence), leading it to operate with reduced margins if seen individually, in case this is the best for the integrated system as a whole. Pipelines and terminals are an integral part and interdependent portion of the refining assets, required to supply the market.

ii) CGU Comperj: comprises assets of the first refining unit of Petrochemical Complex of Rio de Janeiro. The utilities plant that supports the natural gas processing plant (UPGN) of the route 3 integrated project is under construction. This asset is assessed for impairment separately;

iii) CGU Second Refining Unit of RNEST: comprises assets of the second refining unit of Abreu e Lima refinery;

iv) Transportation CGU: comprises assets relating to Transpetro's fleet of vessels. In 2020, the Cartola and Afaulfo Alves vessels were excluded from this CGU, because they ceased operations, and were tested for impairment separately;

v) PANAMAX CGU: comprises Panamax class vessels under construction (EI-512, EI-513 and EI-514);

vi) Hidrovia CGU: comprises the fleet of vessels under construction of the Hidrovia project (transportation of ethanol along the Tietê River);

vii) SIX CGU: shale processing plant; and

viii) Other operations abroad defined as the smallest group of assets that generates independent cash flows.

### **c) Gas & Power CGUs:**

i) Natural gas CGU: comprises natural gas pipelines, natural gas processing plants, consolidating the purchase, transportation and treatment of natural gas businesses, in order to enable the commercialization of natural gas and its liquids (LPG, NGL and ethane). In 2020, management decided to cease operations of UPGN Atalaia, which was tested for impairment separately;

ii) CGU nitrogen fertilizer plants: the nitrogen fertilizer plants have been assessed for impairment separately;

iii) Power CGU: comprises the thermoelectric power generation plants (UTES);

iv) Termocamaçari CGU: the Termocamaçari thermoelectric plant was assessed for impairment separately because there is no expectation of future operation;

v) Other CGUs: operations abroad defined as the smallest group of assets that generates largely independent cash flows.

### **d) Biofuels business CGUs:**

i) Biodiesel CGU: an integrated unit of biodiesel plants defined based on the production planning and operation process, that takes into consideration domestic market conditions, the production capacity of each plant, as well as the results of biofuels auctions and raw materials supply.

ii) Quixadá CGU: comprises the assets of Quixadá Biofuel Plant. This plant is assessed for impairment separately due to its discontinued operation.

Investments in associates and joint ventures, including goodwill, are assessed for impairment separately.

Further information on impairment testing is set out in note 27.

## **4.4. Pension and other post-retirement benefits**

The actuarial obligations and net expenses related to defined benefit pension and health care post-retirement plans are computed based on several financial and demographic assumptions, of which the most significant are:

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- Discount rate: comprises the projected future inflation in addition to an equivalent discounted interest rate that matches the duration of the pension and health care obligations with the future yield curve of long-term Brazilian Government Bonds; and
- Medical costs: comprise the projected growth rates based on per capita health care benefits paid over the last five years, which are used as a basis for projections, converged to the general price inflation index within 30 years.

These and other estimates are reviewed at least annually and may differ materially from actual results due to changing market and financial conditions, as well as actual results of actuarial assumptions.

The sensitivity analysis of discount rates and changes in medical costs as well as additional information about actuarial assumptions are set out in note 19.

### 4.5. Estimates related to contingencies and legal proceedings

The Company is defendant in arbitrations and in legal and administrative proceedings involving civil, tax, labor and environmental issues arising from the normal course of its business, and makes use of estimates to recognize the amounts and the probability of outflow of resources, based on reports and technical assessments from legal advisors and on management's assessment.

These estimates are performed individually, or aggregated if there are cases with similar characteristics, primarily considering factors such as assessment of the plaintiff's demands, consistency of the existing evidence, jurisprudence on similar cases and doctrine on the subject. Specifically for lawsuits by outsourced employees, the Company estimates the expected loss based on a statistical procedure, due to the number of actions with similar characteristics.

Arbitral, legal and administrative decisions against the Company, new jurisprudence and changes of existing evidence can result in changes regarding the probability of outflow of resources and on the estimated amounts, according to the assessment of the legal basis.

Note 20 provides further detailed information about contingencies and legal proceedings.

### 4.6. Decommissioning costs estimates

The Company has legal and constructive obligations to remove equipment and restore onshore and offshore areas at the end of operations. Its most significant asset removal obligations relates to offshore areas. Estimates of costs for future environmental cleanup and remediation activities are based on current information about costs and expected plans for remediation. These obligations are recognized at present value, using a risk-free discount rate, adjusted to the Company's credit risk. Due to the long term until the abandonment, changes in the discount rate can cause significant variations in the recognized amount.

These estimates require performing complex calculations that involve significant judgment since: i) the obligations are long-term; ii) the contracts and regulations contain subjective definitions of the removal and remediation practices and criteria involved when the events actually occur; and iii) asset removal technologies and costs are constantly changing, along with regulations, environmental, safety and public relations considerations.

The Company conducts studies to incorporate technologies and procedures to optimize the process of abandonment, considering industry best practices. However, the timing and amounts of future cash flows are subject to significant uncertainty.

Note 21 provides further detailed information about the decommissioning provisions.

### 4.7. Deferred income taxes

The recognition of deferred taxes involves significant estimates and judgments by the Company. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which a deductible temporary difference can be utilized or it is probable that the entity will have sufficient taxable profit in future periods. In evaluating whether it will have sufficient taxable profit in future periods to support the recognition of deferred tax assets, the Company uses future

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projections and estimates based on its Strategic Plan, which is approved by the Board of Directors annually. Future taxable profits projections are mainly based on the following assumptions: i) Brent crude oil prices; ii) foreign exchange rates; and iii) the Company's projected net finance expenses (income).

Changes in deferred tax assets and liabilities are presented in note 17.

### **4.8. Cash flow hedge accounting involving the Company's future exports**

The Company determines its future exports as "highly probable future exports" based on its current Strategic Plan. The highly probable future exports are determined by a percentage of projected exports revenue over the mid and long term, taking into account the Company's operational and capital expenditure optimization model, limited to a threshold based on a historical percentage of the oil production that is usually sold abroad. Future exports forecasts are reviewed whenever the Company reviews its Strategic Plan assumptions. The approach for determining exports as highly probable future exports is reviewed annually, at least.

See note 38.3 for more detailed information about cash flow hedge accounting and a sensitivity analysis of the cash flow hedge involving future exports.

### **4.9. Write-off – overpayments incorrectly capitalized**

As described in note 23, in the third quarter of 2014, the Company developed an estimation methodology and wrote off US\$2,527 of capitalized costs representing the estimated amounts that Petrobras had overpaid for the acquisition of property, plant and equipment.

The Company has continuously monitored the results of the Lava Jato investigation and the availability of other information related to the scheme of improper payments. In preparing the financial statements for the year ended December 31, 2020, the Company has not identified any additional information that would affect the adopted calculation methodology and consequently require additional write-offs.

### **4.10. Expected credit losses on financial assets**

Expected credit losses on financial assets are based on assumptions relating to risk of default, the determination of whether or not there has been a significant increase in credit risk and expectation of recovery, among others. The Company uses judgment for such assumptions in addition to information from credit rating agencies and inputs based on collection delays.

### **4.11. Leases**

The Company uses incremental borrowing rates to determine the present value of the lease payments, when the interest rate implicit in the lease cannot be readily determined. These incremental borrowing rates are determined mainly based on the Company's cost of funding based on yields of bonds issued by the Company, adjusted by currency and duration of cash outflows of the lease arrangements, economic environment of the country where the lessee operates and similar collateral.

### **4.12. Uncertainty over Income Tax Treatments**

Uncertainties over income tax treatments represent the risks that the tax authority does not accept a certain tax treatment applied by the Company. The Company estimates the probability of acceptance of an uncertain tax treatment by the tax authority based on technical assessments by its legal advisors, considering precedent jurisprudence applicable to current tax legislation, which may be impacted mainly by changes in tax rules or court decisions which may affect the analysis of the fundamentals of uncertainty.

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### 5. New standards and interpretations

#### 5.1. New International Financial Reporting Standards not yet adopted

Standard	Description	Effective on
Interest Rate Benchmark Reform (Phase 2) – Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16.	The amendments relates to the interest rate benchmark reform and transition to IBOR recommended by the Financial Stability Board (FSB), which establishes new requirements relating to the basis for determining the contractual cash flows of financial assets and liabilities measured at amortized cost under the scope of IFRS 9; lease liabilities; hedge accounting; and disclosures.	January 1, 2021, retrospective application (with certain exceptions).
Annual Improvements to IFRS Standards 2018–2020.	The amendments change requirements related to: (i) simplifying the application of IFRS 1 by a subsidiary that becomes a first-time adopter of IFRS after its parent company has already adopted IFRS; (ii) clarifying the fees a company includes in assessing the terms of a new or modified financial liability in order to determine whether to derecognize a financial liability (IFRS 9); and (iii) aligning the fair value measurement requirements in IAS 41 with those in other IFRS Standards. Additionally, the amendments change an illustrative example accompanying IFRS 16 regarding lease incentives.	January 1, 2022, prospective application.
Reference to the Conceptual Framework - Amendments to IFRS 3	The amendments (i) update a certain reference in IFRS 3 to the most recent conceptual framework and (ii) include additional requirements related to obligations under the scope of IAS 37 - Provisions, Contingent Liabilities and Contingent Assets and IFRIC 21 - Levies. In addition, the amendments provide that the buyer should not recognize contingent assets acquired in a business combination.	January 1, 2022, prospective application.
Onerous Contracts - Cost of Fulfilling a Contract - Amendments to IAS 37	The amendments specify which costs an entity includes in determining the cost of fulfilling a contract in assessing whether the contract is onerous.	January 1, 2022.
Property, Plant and Equipment: Proceeds before Intended Use - Amendments to IAS 16	The amendments prohibit a company from deducting plant and equipment amounts received from selling items produced while the company is preparing the asset for its intended use from the cost of property. Instead, a company will recognize such sales proceeds and related cost in profit or loss.	January 1, 2022, retrospective application (with certain exceptions).
Classification of Liabilities as Current or Non-current - Amendments to IAS 1	The amendments establish requirements for the classification of a liability as current or non-current.	January 1, 2023, retrospective application.
IFRS 17 – Insurance Contracts (and Amendments)	IFRS 4 – Insurance Contracts will be superseded by IFRS 17, which establishes the requirements to be applied in the recognition and disclosure of insurance and reinsurance contracts.	January 1, 2023, retrospective application, with certain exceptions.

Petrobras and its subsidiaries have debts indexed to Libor, corresponding to 32% of total finance debt.

In order to prepare for the transition to alternative reference rates, the Company is monitoring the new regulations, aiming at adapting its financial instruments to the new benchmark.

The Company is currently assessing potential impacts arising from the initial application of amendments and new standards listed above, effective as of January 1, 2022, on its consolidated financial statements.

### 6. Context, resilience measures and impacts of the COVID-19 pandemic

#### 6.1. Context

In January 2020, China reported having identified a new variant of coronavirus, causing the disease COVID-19, which was spreading quickly in its population. On March 11, 2020, COVID-19 was declared a pandemic by the World Health Organization (WHO). Social isolation measures arising from this pandemic affected the global economic environment, reducing the demand for oil and its oil products and triggering a shock in the oil and gas industry.

Therefore, in early April, members of the Organization of the Petroleum Exporting Countries and other oil producing countries (OPEC+) announced a new agreement providing for the cut of their combined production by 9.7 million barrels per day (bpd) for May and June 2020, after Brent prices present a material reduction in March and April, reaching the lowest price of the year (US\$ 19.33 per barrel). In another meeting held in July 2020, OPEC+ members agreed to reduce their cuts from 9.7 million

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bpd to 7.7 million bpd from August to December 2020. In December 2020, OPEC+ members decided to reduce their cuts to 7.2 million bpd, mentioning that additional and gradual increases in oil production may occur in the following months.

These events led the Company to bring forward, in the first quarter of 2020, the approval of a new set of assumptions for oil prices, exchange rates and demand, since the short, medium and long-term estimates for these variables were no longer compatible with those approved in the 2020-2024 Strategic Plan. This new set of assumptions was reflected in the interim financial statements of the first quarter of 2020.

The Company regularly monitors realized prices in relation to its assumptions and observed relevant changes in market conditions compared to that approved in the first quarter of 2020, such as the recovery in Brent oil prices and the devaluation of the Real against the U.S. Dollar. Thus, events led the Company to incorporate, in its 2021-2025 Strategic Plan (approved in November 2020), new projections aiming at adjusting short and medium-term premises, but maintaining the convergence of Brent oil price to US\$ 50 per barrel in the long-term.

### 6.2. Resilience measures

The Company, in line with the recommendations of the WHO and the Ministry of Health, announced measures to preserve the health of its employees and support the prevention of contagion in its administrative and operational areas. Some of the measures includes home office for activities which can be realized remotely; temporarily changed work shifts in operational areas to minimize the number of workers commuting; rigorous cleaning of workplaces; distribution of face masks; testing, tracking and quarantine for covid-19; measuring body temperature and testing on pre-shipment for oil platforms and periodically on onshore plants; health monitoring and access to telemedicine services.

Brazilian governmental authorities, in turn, implemented a set of measures to address the economic side effects of the COVID-19 pandemic, aimed at helping the productive sector, mainly: (a) Federal Government measures - (i) PIS/Cofins and INSS-Companies' Contribution - collections for the period from March to May 2020 were postponed to August until November 2020; (ii) FGTS - collections for the period from March to May 2020 were paid in six installments from July to December 2020; (iii) System S (employer contributions to social entities that train and support employees) - 50% reduction in rates from April to June 2020; and (iv) IOF - reduction from 3% to 0% in operations carried out from April to December 2020; and (b) State of Pernambuco measures - (i) ICMS tax on fuel imports from April to December 2020 was deferred for up to 30 days.

As a result of the abrupt reduction in the demand and prices of oil and fuel, the Company adopted a set of measures aiming at reducing costs, postponing cash outflows and optimizing its working capital. The main measures are:

- Draw down of revolving credit lines, amounting to US\$ 8 billion, as well as other lines in the domestic banking market, in the total amount of US\$ 698, in the first quarter of 2020. In the third quarter of 2020, the Company repaid US\$ 7.6 billion of revolving credit lines (see note 34).
- postponement of payment of declared dividends based on 2019 earnings, paid on December 15, 2020;
- postponement of judicial deposits to 2021, mainly relating to tax proceedings;
- reduction and postponement of human resources expenses, with an emphasis on: (i) postponement of payment for the 2019 Performance Award Program to December 2020; (ii) postponement of the payment of 30% of the total monthly remuneration from April to June 2020 of the Board of Directors, President, Executive Officers and upper management, and postponement of the payment of between 10% to 30% of the monthly remuneration of lower management and consultants (which was subsequently paid in September 2020); and (iii) temporary change in workday regime from shift turn and stand-by work to administrative regime, reassessed on a monthly basis, depending on the return to regular operations;
- a set of actions aiming at reducing capital expenditures scheduled for 2020 from US\$ 12 billion to US\$ 8.1 billion, mainly postponement of exploratory activities and interconnection of wells, as well as the depreciation of the Brazilian real against the U.S. dollar;
- reduction of 200 thousand bpd of oil production from April 2020 (including the reduction of 100 thousand bpd announced at the end of March 2020), and a reduction in the utilization factor of refineries from 79% to 60%, allowing the maintenance of reasonable surplus in the storage capacity, aiming at avoiding the adoption of costly measures such as the chartering of ships to store liquids. However, with the evolution of the demand for our products performing better than expected, the

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Company opted for the gradual return to the previous level of average oil production, accompanied by an increase in the utilization factor of the refining facilities;

- a set of actions intending to decrease operating expenses for 2020 by an additional US\$ 2 billion, mainly by: (i) hibernation of platforms operating in shallow waters, which have higher lifting costs per barrel, and for which, due to the drop in oil prices, the Company estimates negative cash flows; (ii) lowering expenses with stoppages in wells and optimization of production logistics; and (iii) postponement of new relevant contracts for a period of 90 days (during the second quarter of 2020); and
- as a result of the structural reduction in the demand for natural gas in the Brazilian market, with the consequent declaration of force majeure by all local natural gas distributors, the Company declared force majeure in the agreements for the purchase of natural gas from the Manati field and from Yacimientos Petrolíferos Fiscales Bolivianos (YPFB), as provided for in these contracts. These measures resulted in a reduction of potential disputes, exempting the Company from complying with the take-or-pay obligations. In September 2020, with the resumption of consumption from our customers, both contracts were resumed in their normal supply conditions.

In addition, the global adverse scenario encouraged the Company to revise its main metric relating to indebtedness, contained in the Strategic Plan 2020-2024, replacing the Net debt / Adjusted EBITDA ratio with Gross debt. The target approved for Gross debt for 2020 is US\$ 87 billion, the same level as December 31, 2019, which was achieved at December 31, 2020.

As a result of the implementation of the aforementioned measures, the Company, after simulating several stress scenarios, estimates that it will be able to balance its financing and cash flows. Thus, management believes that it has adequate resources to continue its operations for at least 12 months after the reporting date and, therefore, the Company comply with the going concern principle in the preparation of these consolidated financial statements.

### 6.3. Effects on these consolidated financial statements

The effects of the COVID-19 pandemic and the economic environment were considered in the preparation of these consolidated financial statements. For information on key estimates and judgments that require a high level of judgment and complexity in their applications and that could materially affect the Company's financial condition and results, see note 4.

The results of the revision of assumptions (both in the first quarter of 2020 and in the 2021-2025 Strategic Plan), as well as the effects arising from the pandemic, are presented below:

- Impairment losses for 2020 amounted to US\$ 7,339. Oil prices and expectations for the world economy growth presented a consistent decline in 2020, since the end of March 2020, as well as the demand for oil products was also severely affected in this period. As a result, in the first quarter of 2020, the Company adopted a new set of assumptions adjusted from those approved in the 2020-2024 Strategic Plan, as well as decided to hibernate certain developed fields which management did not consider highly profitable. Thus, impairment losses were recognized in the first quarter of 2020 in the amount of US\$ 13,371. In the last quarter of 2020, the Company approved its 2021-2025 Strategic Plan, updating expected future production, project portfolio, economic assumptions, among other estimates. In this context, impairment reversals were accounted for in the last quarter, in the amount of US\$ 6,019 (see note 27);
- expected exports were impacted by the effects arising from the oil price shock in the first half of 2020 and effects arising from the COVID-19 pandemic. Thus, a portion of highly probable future exports whose exchange rate variations were designated in hedge relationships are no longer considered highly probable, but are still expected to occur, and as a consequence the hedge relationships were revoked in the first quarter of 2020, in the amount of US\$ 35,774, significantly increasing the Company's U.S. dollar/real exposure at March 31, 2020. According to the 2021-2025 Strategic Plan, there is an increase in expected exports compared to the expectation in the first quarter and consequently in highly probable future exports, but not in an amount equal to or greater than the finance debt and lease liabilities subject to designation as hedge instruments. As a result, the relevant increase in Dollar/Real exposure observed during 2020 remains at December 31, 2020. In 2020, US\$ 548 was reclassified from Other comprehensive income to the Statement of income, mainly in the first quarter of 2020 (note 38.3);
- inventories adjusted to net realizable value, accounting for a US\$ 375 loss within cost of sales (note 15);

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- recognition of expected credit losses (ECL) on the Company's financial assets that are not measured at fair value through profit or loss considered estimated impacts of the COVID-19 pandemic throughout 2020. For financial assets whose counterparties have ratings published by credit risk agencies, when already reflecting the effects of the pandemic, the information was used to calculate the ECL. For other financial assets, in general, the expected effects of the COVID-19 pandemic were incorporated into the ECL by identifying the changes in default probability based on observable data by area of operation, type of product and region. No significant effects were identified (note 14.3);
- deferred tax assets were assessed for recoverability based on projections of future taxable profits (note 17);
- with the approval of the 2021-2025 Strategic Plan, new estimates of oil and gas reserves were incorporated to reflect the update on the Company's project portfolio, the technical uncertainties and the updated assumptions such as prices and costs. Therefore, the provision for decommissioning costs was adjusted by US\$ 5,720 (note 21);
- revenue recognition from contracts with customers had no changes in its assumptions. The expectation of satisfaction of the obligation by the customer remains at the maturity of each operation, considered highly probable. The Company's customers gave no indication about the intent to breach or revise the terms and conditions of contracts in effect as of December 31, 2020; and
- the Company's litigation includes no cases related to COVID-19 with potential financial risk that directly impact this financial information. However, the Company is aware of some recent labor actions filed by certain unions, whose claims are related to the pandemic and the resilience measures recently announced to reduce expenses, as follows: (i) two temporary measures to contain personnel expenses; (ii) sufficiency of the preventive measures against the spread of COVID-19 and the criteria used for removing people from the risk group; and (iii) the union's participation in the organizational response structure. The best estimate for these claims as of the reporting date is that the likelihood of loss is not probable.

## 7. Capital Management

The Company's objectives in its capital management is to achieve an adequate level of return on its capital structure in order to safeguard its ability to continue as a going concern, adding value to its shareholders and investors. Its main sources of funding have been cash provided by its operating activities and divestments.

The reduction in the cost of capital, by means of its liability management, is one of the pillars of the 2021-2025 Strategic Plan. The Company aims to mitigate risks by actively managing liabilities, maximizing shareholder return and optimizing working capital.

Gross debt (composed of finance debt and lease liability, current and non-current) is a top metric for the Company, allowing monitoring Petrobras's indebtedness, which management considers essential for increasing competitiveness with peers by reducing our cost of capital. For 2021, the Company seeks to reduce its gross debt to US\$ 67 billion. In addition, the Shareholders Dividends Policy determines that, in case of a gross debt lower than US\$ 60 billion (which is targeted for 2022), it may distribute 60% of the difference between net cash provided by operating activities and acquisition of PP&E and intangibles assets, as set out in note 36.

As of December 31, 2020, gross debt decreased to US\$ 75,538, from US\$ 87,121 as of December 31, 2019.

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## 8. Cash and cash equivalents and Marketable securities

### 8.1. Cash and cash equivalents

	12.31.2020	12.31.2019
Cash at bank and in hand	552	572
Short-term financial investments		
- In Brazil		
Brazilian interbank deposit rate investment funds and other short-term deposits	2,592	1,699
Other investment funds	28	4
	2,620	1,703
- Abroad		
Time deposits	2,574	7
Automatic investing accounts and interest checking accounts	5,633	4,620
Other financial investments	332	470
	8,539	5,097
Total short-term financial investments	11,159	6,800
<b>Total cash and cash equivalents</b>	<b>11,711</b>	<b>7,372</b>

Short-term financial investments in Brazil primarily consist of investments in funds holding Brazilian Federal Government Bonds that can be redeemed immediately, as well as reverse repurchase agreements that mature within three months as of the date of their acquisition. Short-term financial investments abroad comprise time deposits that mature in three months or less from the date of their acquisition, highly-liquid automatic investment accounts, interest checking accounts and other short-term fixed income instruments.

### 8.2. Accounting policy for cash and cash equivalents

Cash and cash equivalents comprise cash on hand, term deposits with banks and short-term highly-liquid financial investments that are readily convertible to known amounts of cash, are subject to insignificant risk of changes in value and have a maturity of three months or less from the date of acquisition.

### 8.3. Marketable securities

	12.31.2020			12.31.2019		
	In Brazil	Abroad	Total	In Brazil	Abroad	Total
Fair value through profit or loss	652	-	652	875	-	875
Fair value through other comprehensive income	-	-	-	7	-	7
Amortized cost	44	7	51	45	19	64
<b>Total</b>	<b>696</b>	<b>7</b>	<b>703</b>	<b>927</b>	<b>19</b>	<b>946</b>
Current	652	7	659	875	13	888
Non-current	44	-	44	52	6	58

Marketable securities classified as fair value through profit or loss refer mainly to investments in Brazilian Federal Government Bonds. These financial investments have maturities of more than three months and are generally classified as current assets due to their maturity or the expectation of their realization in the short term.

#### 8.3.1. Accounting policy for marketable securities

Marketable securities are initially measured at fair value and their subsequent measurement depends on their classification:

- Amortized cost: when the contractual terms of the security give rise on specified dates to cash flows arising from payments of principal and interest on the principal amount outstanding, and the business model's objective is to hold the security in order to collect contractual cash flows. The interest income is based on the effective interest method.
- Fair value through other comprehensive income: equity instruments not held for trading purposes for which the Company has made an irrevocable election in their initial recognition to present changes in fair value in other comprehensive income rather than within profit or loss;

## NOTES TO THE FINANCIAL STATEMENTS

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- Fair value through profit or loss: if the marketable security do not meet the criteria for the two aforementioned categories.

## 9. Sales revenues

### 9.1. Revenues from contracts with customers

As an integrated energy company, revenues from contracts with customers derive from different products sold by the Company's operating segments, taking into consideration specific characteristics of the markets where they operate. For additional information about the operating segments of the Company, its activities and its respective products sold, see note 13.

The determination of transaction prices derives from methodologies and policies based on the parameters of these markets, reflecting operating risks, level of market share, changes in exchange rates and international commodity prices, including Brent oil prices, oil products such as diesel and gasoline, and the Henry Hub Index.

Revenues from sales are recognized at the moment the control is transferred to the client, that occurs upon delivery at the contractually agreed place or when the service is provided. Generally, prices for products and services are fixed prior to or shortly after delivery. Therefore, no significant changes in transactions prices are expected to be recognized in periods after the satisfaction of the performance obligations, except for some exports in which final prices are linked to changes in commodity price after their transfer of control. Sales proceeds are generally collected in the short-term, thus there are no significant financing components.

In addition, the Company acts as an agent in the biofuel business, where there is no control of the biodiesel purchased from the producers and sold to distributors at any time during the sale operation. Those revenues totaled US\$ 37 in 2020 (US\$ 46 in 2019).

### 9.2. Net sales revenues

	2020	2019	2018
Diesel	13,924	23,007	23,450
Diesel subsidy	-	-	1,415
Gasoline	6,313	9,810	11,690
Liquefied petroleum gas	3,383	4,159	4,490
Jet fuel	1,455	3,832	4,208
Naphtha	1,694	1,669	2,455
Fuel oil (including bunker fuel)	795	1,026	1,233
Other oil products	2,712	3,410	3,769
<b>Subtotal oil products</b>	<b>30,276</b>	<b>46,913</b>	<b>52,710</b>
Natural gas	3,649	5,929	5,425
Renewables and nitrogen products	59	245	366
Breakage	438	645	687
Electricity	1,109	1,322	2,027
Services, agency and others	803	940	1,370
<b>Domestic market</b>	<b>36,334</b>	<b>55,994</b>	<b>62,585</b>
Exports	15,945	18,085	15,413
Oil	11,720	13,180	11,192
Fuel oil (including bunker fuel)	3,525	3,321	3,022
Other oil products	700	1,584	1,199
Sales abroad (*)	1,404	2,510	6,640
<b>Foreign market</b>	<b>17,349</b>	<b>38,680</b>	<b>22,053</b>
<b>Sales revenues (**)</b>	<b>53,683</b>	<b>76,589</b>	<b>84,638</b>

(\*) Sales revenues from operations outside of Brazil, including trading and excluding exports.

(\*\*) Sales revenues by business segment are set out in note 9.

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Following the reduction of the investment in BR Distribuidora on July 25, 2019, this company became a non-consolidated entity. Hence, sales to this associate represent more than 10% of the Company sales revenues, mainly associated with the refining, transportation and marketing segment.

### 9.3. Remaining performance obligations

The Company is party to sales contracts with original expected duration of more than 1 year, which define the volume and timing of goods or services to be delivered during the term of the contract, and the payment terms for these future sales.

The estimated remaining values of these contracts at December 31, 2020 presented below are based on the contractually agreed future sales volumes, as well as prices prevailing at December 31, 2020 or practiced in recent sales reflecting more directly observable information:

	Expected recognition within 1 year	Expected recognition after 1 year	Total
<b>Domestic market</b>			
Gasoline	6,561	-	6,561
Diesel	15,008	-	15,008
Natural gas	4,383	7,865	12,248
Services and others	4,110	4,330	8,440
Naphtha	946	3,703	4,649
Electricity	713	2,491	3,204
Other oil products	17	-	17
Jet fuel	404	-	404
<b>Foreign market</b>			
Exports	1,925	9,539	11,464
<b>Total</b>	<b>34,067</b>	<b>27,928</b>	<b>61,995</b>

Revenues will be recognized once goods are transferred and services are provided to the customers and their measurement and timing of recognition will be subject to future demands, changes in commodities prices, exchange rates and other market factors.

The table above does not include information on contracts with original expected duration of less than one year, such as spot-market contracts, variable considerations which are constrained, and information on contracts only establishing general terms and conditions (Master Agreements), for which volumes and prices will only be defined in subsequent contracts.

In addition, electricity sales are mainly driven by demands to generate electricity from thermoelectric power plants, as and when requested by the Brazilian National Electric System Operator (ONS). These requests are substantially affected by Brazilian hydrological conditions. Thus, the table above presents mainly fixed amounts for the electricity to be available to customers in these operations.

### 9.4. Contract liabilities

The balance of contract liabilities carried on the statement of financial position at December 31, 2020 amounted to US\$ 69 (US\$ 128 as of December 31, 2019). This amount is classified as other current liabilities and primarily comprises advances from customers in ship and take or pay contracts to be recognized as revenue based on future sales of natural gas or following the non-exercise of the right by the customer.

### 9.5. Accounting policy for revenues

The Company evaluates contracts with customers that will be subject to revenue recognition and identifies the distinct goods and services promised in each of them.

Performance obligations are promises to transfer to the customer goods or services (or a bundle of goods or services) that are distinct, or series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.

## NOTES TO THE FINANCIAL STATEMENTS

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(Expressed in millions of US Dollars, unless otherwise indicated)

Revenues are measured based on the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties. Transaction prices are based on contractually stated prices, reflecting the Company's pricing methodologies and policies based on market parameters.

When transferring a good, that is, when the customer obtains its control, the company satisfies the performance obligation and recognizes the respective revenue, which usually occurs at a point in time upon delivery.

### 10. Costs and expenses by nature

#### 10.1. Cost of sales

	2020	2019	2018
Raw material, products for resale, materials and third-party services (*)	(12,699)	(20,694)	(26,810)
Depreciation, depletion and amortization	(8,847)	(12,036)	(10,954)
Production taxes	(5,920)	(9,741)	(10,905)
Employee compensation	(1,729)	(3,261)	(3,515)
<b>Total</b>	<b>(29,195)</b>	<b>(45,732)</b>	<b>(52,184)</b>

(\*) It Includes short-term leases and inventory turnover.

#### 10.2. Selling expenses

	2020	2019	2018
Materials, third-party services, freight, rent and other related costs	(4,163)	(3,664)	(3,445)
Depreciation, depletion and amortization	(564)	(549)	(145)
Allowance for expected credit losses	2	(49)	(32)
Employee compensation	(159)	(214)	(205)
<b>Total</b>	<b>(4,884)</b>	<b>(4,476)</b>	<b>(3,827)</b>

#### 10.3. General and administrative expenses

	2020	2019	2018
Employee compensation	(749)	(1,427)	(1,500)
Materials, third-party services, freight, rent and other related costs	(252)	(539)	(626)
Depreciation, depletion and amortization	(89)	(158)	(113)
<b>Total</b>	<b>(1,090)</b>	<b>(2,124)</b>	<b>(2,239)</b>

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*(Expressed in millions of US Dollars, unless otherwise indicated)***11. Other income and expenses**

	2020	2019	2018
PIS and COFINS credit - exclusion of ICMS (VAT tax) from the basis of calculation	1,514	-	-
Reimbursements from E&P partnership operations	912	480	331
Pension and medical benefits - retirees	889	(1,371)	(1,401)
Equalization of expenses - Production Individualization Agreements	701	2	(279)
Results on disposal/write-offs of assets and on remeasurement of investment retained with	499	6,046	416
Early termination and cash outflows revision of lease agreements	276	60	-
Amounts recovered from Lava Jato investigation	155	220	457
Fines imposed on suppliers	95	260	223
Unscheduled stoppages and pre-operating expenses	(1,441)	(1,321)	(1,282)
Voluntary Separation Plan - PDV	(1,017)	(198)	2
Losses with legal, administrative and arbitration proceedings	(493)	(1,520)	(2,283)
Variable compensation program (*)	(439)	(643)	(265)
Gains / (losses) on decommissioning of returned/abandoned areas	(342)	(155)	621
Gains/(losses) with Commodities Derivatives	(308)	(370)	(416)
Reclassification of comprehensive income (loss) due to the disposal of equity-accounted	(43)	(34)	-
Profit sharing	-	(43)	(442)
Employee Career and Compensation Plan - PCR	-	(2)	(293)
Agreement with US Authorities	-	-	(895)
Others	40	(212)	(254)
<b>Total</b>	<b>998</b>	<b>1,199</b>	<b>(5,760)</b>

(\*) In 2020, it includes a US\$ 84 reversal related to the provision recognized in 2019, and US\$3 expense related to Directors variable compensation.

**12. Net finance income (expense)**

	2020	2019	2018
<b>Finance income</b>	<b>551</b>	<b>1,330</b>	<b>2,381</b>
Income from investments and marketable securities (Government Bonds)	202	558	563
Gains from signed agreements (electric sector)	-	79	724
Interest on petroleum and alcohol accounts	79	8	87
Other income, net	270	685	1,007
<b>Finance expenses</b>	<b>(6,004)</b>	<b>(7,086)</b>	<b>(5,675)</b>
Interest on finance debt	(3,595)	(4,847)	(5,920)
Unwinding of discount on lease liabilities	(1,322)	(1,514)	(10)
Discount and premium on repurchase of debt securities	(1,157)	(860)	(651)
Capitalized borrowing costs	941	1,332	1,814
Unwinding of discount on the provision for decommissioning costs	(638)	(795)	(652)
Other finance expenses and income, net	(233)	(402)	(256)
<b>Foreign exchange gains (losses) and indexation charges</b>	<b>(4,177)</b>	<b>(3,008)</b>	<b>(3,190)</b>
Foreign exchange gains (losses) (*)	(1,363)	(72)	(66)
Reclassification of hedge accounting to the Statement of Income (*)	(4,720)	(3,136)	(3,315)
Pis and Cofins inflation indexation income - exclusion of ICMS (VAT tax) from the basis of calculation	1,709	-	-
Other foreign exchange gains (losses) and indexation charges, net	197	200	191
<b>Total</b>	<b>(9,630)</b>	<b>(8,764)</b>	<b>(6,484)</b>

(\*) For more information, see notes 38.3c and 38.3a.

**NOTES TO THE FINANCIAL STATEMENTS**

PETROBRAS

(Expressed in millions of US Dollars, unless otherwise indicated)

**13. Net income by operating segment**
**Consolidated Statement of Income by operating segment**

						2020
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Eliminations	Total
Sales revenues	34,395	47,782	7,725	876	(37,095)	53,683
Intersegments	33,524	865	2,455	251	(37,095)	-
Third parties	871	46,917	5,270	625	-	53,683
Cost of sales	(18,098)	(44,011)	(3,985)	(832)	37,731	(29,195)
Gross profit (loss)	16,297	3,771	3,740	44	636	24,488
Income (expenses)	(9,247)	(2,992)	(2,581)	419	(24)	(14,425)
Selling	-	(2,520)	(2,320)	(20)	(24)	(4,884)
General and administrative	(155)	(161)	(85)	(689)	-	(1,090)
Exploration costs	(803)	-	-	-	-	(803)
Research and development	(232)	(11)	(10)	(102)	-	(355)
Other taxes	(478)	(137)	(31)	(306)	-	(952)
Impairment of assets	(7,364)	164	36	(175)	-	(7,339)
Other income and expenses	(215)	(327)	(171)	1,711	-	998
Net income / (loss) before financial results and income taxes	7,050	779	1,159	463	612	10,063
Net finance income (expenses)	-	-	-	(9,630)	-	(9,630)
Results in equity-accounted investments	(181)	(437)	128	(169)	-	(659)
Net income / (loss) before income taxes	6,869	342	1,287	(9,336)	612	(226)
Income taxes	(2,398)	(265)	(393)	4,438	(208)	1,174
<b>Net income for the period</b>	<b>4,471</b>	<b>77</b>	<b>894</b>	<b>(4,898)</b>	<b>404</b>	<b>948</b>
Attributable to:						
Shareholders of Petrobras	4,475	111	821	(4,670)	404	1,141
Non-controlling interests	(4)	(34)	73	(228)	-	(193)
	<b>4,471</b>	<b>77</b>	<b>894</b>	<b>(4,898)</b>	<b>404</b>	<b>948</b>

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	<b>2019</b>					
	<b>Exploration and Production</b>	<b>Refining, Transportation &amp; Marketing</b>	<b>Gas &amp; Power</b>	<b>Corporate and other business</b>	<b>Eliminations</b>	<b>Total</b>
Sales revenues	50,462	67,538	11,493	1,221	(54,125)	76,589
Intersegments	49,400	9,432	3,308	226	(54,125)	8,241
Third parties	1,062	58,106	8,185	995	-	68,348
Cost of sales	(27,304)	(61,578)	(7,713)	(1,167)	52,030	(45,732)
Gross profit (loss)	23,158	5,960	3,780	54	(2,095)	30,857
Income (expenses)	(4,181)	(4,334)	2,580	(4,282)	(26)	(10,243)
Selling	-	(2,164)	(2,260)	(31)	(21)	(4,476)
General and administrative	(254)	(336)	(134)	(1,401)	1	(2,124)
Exploration costs	(799)	-	-	-	-	(799)
Research and development	(394)	(11)	(15)	(156)	-	(576)
Other taxes	(127)	(151)	(152)	(189)	-	(619)
Impairment of assets	(1,956)	(697)	(194)	1	(2)	(2,848)
Other income and expenses	(651)	(975)	5,335	(2,506)	(4)	1,199
Net income / (loss) before financial results and income taxes	18,977	1,626	6,360	(4,228)	(2,121)	20,614
Net finance income (expenses)	-	-	-	(8,764)	-	(8,764)
Results in equity-accounted investments	86	(151)	103	115	-	153
Net income / (loss) before income taxes	19,063	1,475	6,463	(12,877)	(2,121)	12,003
Income taxes	(6,451)	(552)	(2,162)	4,245	720	(4,200)
<b>Net income from continuing operations for the period</b>	<b>12,612</b>	<b>923</b>	<b>4,301</b>	<b>(8,632)</b>	<b>(1,401)</b>	<b>7,803</b>
Net income from discontinued operations for the period	-	-	3	2,557	-	2,560
<b>Net income for the period</b>	<b>12,612</b>	<b>923</b>	<b>4,304</b>	<b>(6,075)</b>	<b>(1,401)</b>	<b>10,363</b>
Net income attributable to shareholders of Petrobras	12,624	1,021	4,180	(6,273)	(1,401)	10,151
Net income from continuing operations	12,624	1,021	4,179	(8,763)	(1,401)	7,660
Net income from discontinued operations	-	-	1	2,490	-	2,491
Non-controlling interests	(12)	(98)	124	198	-	212
Net income from continuing operations	(12)	(98)	121	132	-	143
Net income from discontinued operations	-	-	3	66	-	69
	<b>12,612</b>	<b>923</b>	<b>4,304</b>	<b>(6,075)</b>	<b>(1,401)</b>	<b>10,363</b>

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	2018					
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Eliminations	Total
Sales revenues	52,382	73,448	12,241	1,731	(55,164)	84,638
Intersegments	50,052	16,655	3,701	205	(55,164)	15,449
Third parties	2,330	56,793	8,540	1,526	-	69,189
Cost of sales	(28,968)	(67,011)	(9,023)	(1,611)	54,429	(52,184)
Gross profit (loss)	23,414	6,437	3,218	120	(735)	32,454
Income (expenses)	(5,068)	(3,437)	(2,461)	(4,662)	(38)	(15,666)
Selling	(80)	(1,777)	(1,867)	(76)	(27)	(3,827)
General and administrative	(257)	(376)	(152)	(1,453)	(1)	(2,239)
Exploration costs	(524)	-	-	-	-	(524)
Research and development	(443)	(11)	(21)	(166)	-	(641)
Other taxes	(115)	(207)	(65)	(283)	-	(670)
Impairment of assets	(1,391)	(442)	(190)	18	-	(2,005)
Other income and expenses	(2,258)	(624)	(166)	(2,702)	(10)	(5,760)
Net income / (loss) before financial results and income taxes	18,346	3,000	757	(4,542)	(773)	16,788
Net finance income (expenses)	-	-	-	(6,484)	-	(6,484)
Results in equity-accounted investments	75	362	95	(9)	-	523
Net income / (loss) before income taxes	18,421	3,362	852	(11,035)	(773)	10,827
Income taxes	(6,236)	(1,020)	(257)	2,994	263	(4,256)
<b>Net income from continuing operations for the period</b>	<b>12,185</b>	<b>2,342</b>	<b>595</b>	<b>(8,041)</b>	<b>(510)</b>	<b>6,571</b>
Net income from discontinued operations for the period	-	-	15	828	-	843
<b>Net income for the period</b>	<b>12,185</b>	<b>2,342</b>	<b>610</b>	<b>(7,213)</b>	<b>(510)</b>	<b>7,414</b>
Attributable to:						
Net income attributable to shareholders of Petrobras	12,190	2,393	482	(7,382)	(510)	7,173
Net income from continuing operations	12,190	2,393	471	(7,972)	(510)	6,572
Net income from discontinued operations	-	-	11	590	-	601
Non-controlling interests	(5)	(51)	128	169	-	241
Net income from continuing operations	(5)	(51)	124	(69)	-	(1)
Net income from discontinued operations	-	-	4	238	-	242
	<b>12,185</b>	<b>2,342</b>	<b>610</b>	<b>(7,213)</b>	<b>(510)</b>	<b>7,414</b>

The consolidated amounts of intersegment sales (remaining after eliminations) relates to sales from the RT&M to BR, which is presented as discontinued operation within Corporate and other business.

### 13.1. Accounting policy for operating segments

The information related to the Company's operating segments is prepared based on available financial information directly attributable to each segment, or items that can be allocated to each segment on a reasonable basis. This information is presented by business activity, as used by the Company's Board of Executive Officers (Chief Operating Decision Maker – CODM) on the decision-making process of resource allocation and performance evaluation.

The measurement of segment results includes transactions carried out with third parties, including associates and joint ventures, as well as transactions between operating segments. Transfers between operating segments are recognized at internal transfer prices derived from methodologies that take into account market parameters and are eliminated only to provide reconciliations to the consolidated financial statements.

The Company's business segments disclosed separately are:

**Exploration and Production (E&P):** this segment covers the activities of exploration, development and production of crude oil, NGL (natural gas liquid) and natural gas in Brazil and abroad, for the primary purpose of supplying its domestic refineries. The

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E&P segment also operates through partnerships with other companies and includes holding interest in foreign entities operating in this segment.

As an energy Company with a focus on oil and gas, intersegment sales revenue refers mainly to oil transfers to the Refining, Transportation and Marketing segment, aiming to supply the Company's refineries and meet the domestic demand for oil products. These transactions are measured by internal transfer prices based on international oil prices and their respective exchange rate impacts, taking into account the specific characteristics of the transferred oil stream.

In addition, the E&P segment revenues include transfers of natural gas to the natural gas processing plants within Gas and Power segment. These transactions are measured at internal transfer prices based on the international prices of this commodity.

Revenue from sales to third parties mainly reflects services rendered relating to E&P activities, sales of the E&P's natural gas processing plants, as well as the oil and natural gas operations carried out by subsidiaries abroad.

**Refining, Transportation and Marketing (RT&M):** this segment covers the refining, logistics, transport and trading of crude oil and oil products activities in Brazil and abroad, as well as exports of ethanol. This segment also includes the petrochemical operations, such as extraction and processing of shale and holding interests in petrochemical companies in Brazil.

This segment carries out the acquisition of crude oil from the E&P segment, imports oil for refinery slate, and acquires oil products in international markets taking advantage of the existing price differentials between the cost of processing domestic oil and that of importing oil products.

Intersegment revenues primarily reflect the sale of oil products for the distribution segment at market prices and the operations for the Gas and Power and E&P segments at internal transfer price.

Revenues from sales to third parties primarily reflect the trading of oil products in Brazil and the export and trade of oil and oil products by foreign subsidiaries.

**Gas and Power:** this segment covers the activities of logistic and trading of natural gas and electricity, transportation and trading of LNG (liquefied natural gas), generation and electricity by means of thermoelectric power plants, as well as holding interests in transporters and distributors of natural gas in Brazil and abroad. It also includes natural gas processing and fertilizers production.

Intersegment revenues primarily reflect the transfers of natural gas processed, liquefied petroleum gas (LPG) and NGL to RT&M. These transactions are measured at internal transfer prices.

This segment purchases national natural gas from the E&P segment, from partners and third parties, imports natural gas from Bolivia and LNG to meet national demand.

Revenues from sales to third parties primarily reflect natural gas processed to distributors, as well as generation and trading of electricity.

Corporate and other businesses comprise items that cannot be attributed to the other segments, as well as distribution and biofuels businesses. Corporate items comprise those related to corporate financial management, corporate overhead and other expenses, including actuarial expenses related to the pension and medical benefits for retired employees and their dependents. Distribution business reflects the interest in the associate BR Distribuidora (investments and results in equity-accounted investments), as well as the distribution of oil products abroad (South America). From 2018 to July 2019, for comparative purposes, it also includes net income from discontinued operations. Biofuels business reflects production activities of biodiesel, its co-products and ethanol.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***14. Trade and other receivables****14.1. Trade and other receivables, net**

	12.31.2020	12.31.2019
Receivables from contracts with customers		
Third parties	3,081	4,481
Related parties		
Investees (note 39.1)	664	794
Receivables from the electricity sector	205	334
Subtotal	3,950	5,609
Other trade receivables		
Third parties		
Receivables from divestments (*)	1,523	1,434
Lease receivables	467	482
Other receivables	2,536	831
Related parties		
Petroleum and alcohol accounts - receivables from Brazilian Government (note 39.2)	482	304
Subtotal	5,008	3,051
<b>Total trade receivables</b>	<b>8,958</b>	<b>8,660</b>
Expected credit losses (ECL) - Third parties	(1,528)	(2,286)
Expected credit losses (ECL) - Related parties	(68)	(45)
<b>Total trade receivables, net</b>	<b>7,362</b>	<b>6,329</b>
Current	4,731	3,762
Non-current	2,631	2,567

(\*) It comprises receivable from the divestment of NTS and contingent payments from the sale of interest in Roncador field.

(\*\*) It includes amounts related to the purchase and sale of production platforms and equipment from our partners in E&amp;P consortia

Trade and other receivables are generally classified as measured at amortized cost, except for receivables with final prices linked to changes in commodity price after their transfer of control, which are classified as measured at fair value through profit or loss, amounting to US\$507 as of December 31, 2020 (US\$ 357 as of December 31, 2019).

**14.2. Aging of trade and other receivables – third parties**

	12.31.2020		12.31.2019	
	Trade receivables	Expected credit losses	Trade receivables	Expected credit losses
Current	5,850	(130)	4,658	(142)
Overdue:				
1-90 days	205	(8)	251	(38)
91-180 days	15	(9)	24	(8)
181-365 days	42	(28)	49	(13)
More than 365 days	1,495	(1,353)	2,245	(2,086)
<b>Total</b>	<b>7,607</b>	<b>(1,528)</b>	<b>7,227</b>	<b>(2,287)</b>

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### 14.3. Changes in provision for expected credit losses

	2020	2019
Opening balance	2,331	4,305
Additions	209	217
Write-offs	(698)	(1,241)
Reversals	(3)	-
Transfer of assets held for sale	(3)	(871)
Cumulative translation adjustment	(240)	(79)
<b>Closing balance</b>	<b>1,596</b>	<b>2,331</b>
Current	218	1,103
Non-current	1,378	1,228

In 2020, the additions include an increase of US\$ 60 on receivables in foreign currency, resulting from the 29% exchange rate devaluation in the year ended December 31, 2020, as well as the recording of a supplementary provision arising from the effects of the COVID-19 on the economy (US\$ 19).

In 2020, the write-offs primarily relate to the write-off of receivables, by a subsidiary abroad, relating to construction and renovation of platforms. In 2019, the write-offs primarily relate to the termination of a lawsuit relating to the electricity sector.

### 14.4. Accounting policy for trade receivables

Trade receivables are generally classified at amortized cost, except for certain receivables classified at fair value through profit or loss, whose cash flows are distinct from the receipt of principal and interest, including receivables with final prices linked to changes in commodity price after their transfer of control.

When the Company is the lessor in a finance lease, a receivable is recognized at the amount of the net investment in the lease, consisting of the lease payments receivable and any unguaranteed residual value accruing to the Company, discounted at the interest rate implicit in the lease.

The Company measures expected credit losses for short-term trade receivables using a provision matrix based on historical observed default rates adjusted by current and forward-looking information when applicable and available without undue cost or effort.

The Company measures the allowance for expected credit losses of other trade receivables based on their 12-month expected credit losses unless their credit risk has increased significantly since their initial recognition, in which case the allowance is based on their lifetime expected credit losses.

When determining whether there has been a significant increase in credit risk, the Company compares the risk of default on initial recognition and at the reporting date.

Regardless of the assessment of significant increase in credit risk, a delinquency period of 30 days past due triggers the definition of significant increase in credit risk on a financial asset, unless otherwise demonstrated by reasonable and supportable information.

The Company assumes that the credit risk on the trade receivable has not increased significantly since initial recognition if the receivable is considered to have low credit risk at the reporting date. Low credit risk is determined based on external credit ratings or internal methodologies.

In the absence of controversy or other issues that may result in the suspension of collection, the Company assumes that a default occurs whenever the counterparty does not comply with the legal obligation to pay its debts when due or, depending on the instrument, when it is at least 90 days past due.

The measurement of expected credit loss comprises the difference between all contractual cash flows that are due to the Company and all the cash flows that the Company expects to receive, discounted at the original effective interest rate weighted by the probability of default.

## NOTES TO THE FINANCIAL STATEMENTS

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### 15. Inventories

	12.31.2020	12.31.2019
Crude oil	2,242	3,905
Oil products	1,925	2,274
Intermediate products	396	586
Natural gas and Liquefied Natural Gas (LNG)	122	173
Biofuels	30	28
Fertilizers	8	28
Total products	4,723	6,994
Materials, supplies and others	954	1,195
<b>Total</b>	<b>5,677</b>	<b>8,189</b>

In the year ended December 31, 2020, the Company recognized a US\$ 375 loss within cost of sales, adjusting inventories to net realizable value (a US\$ 15 loss within cost of sales in the year ended December 31, 2019) primarily due to changes in international prices of crude oil and oil products.

At December 31, 2020, the Company had pledged crude oil and oil products volumes as collateral for the Terms of Financial Commitment (TFC) signed by Petrobras and Petros in 2008, in the amount of US\$ 2,750 (US\$ 3,525 at December 31, 2019).

#### 15.1. Accounting policy for inventories

Inventories are determined by the weighted average cost method adjusted to the net realizable value when it is lower than its carrying amount.

Net realizable value is the estimated selling price of inventory in the ordinary course of business, less estimated cost of completion and estimated expenses to complete its sale. Changes in sales prices after the reporting date of the financial statements are considered in the calculation of the net realizable value if they confirm the conditions existing on that reporting date.

Crude oil and LNG inventories can be traded or used for production of oil products.

Intermediate products are those product streams that have been through at least one of the refining processes, but still need further treatment, processing or converting to be available for sale.

Biofuels mainly include ethanol and biodiesel inventories.

Materials, supplies and others mainly comprise production supplies and operating materials used in the operations of the Company, stated at the average purchase cost, not exceeding replacement cost.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***16. Trade payables**

	12.31.2020	12.31.2019
Third parties in Brazil	2,828	2,560
Third parties abroad	3,603	2,045
Related parties	428	996
<b>Total in current liabilities</b>	<b>6,859</b>	<b>5,601</b>

**17. Taxes****17.1. Income taxes and other taxes****Income taxes**

	Current assets		Current liabilities		Non-current liabilities	
	12.31.2020	12.31.2019	12.31.2020	12.31.2019	12.31.2020	12.31.2019
Taxes in Brazil						
Income taxes	391	2,485	111	71	-	-
Income taxes - Tax settlement programs	-	-	45	57	357	504
	<b>391</b>	<b>2,485</b>	<b>156</b>	<b>128</b>	<b>357</b>	<b>504</b>
Taxes abroad	27	8	42	148	-	-
<b>Total</b>	<b>418</b>	<b>2,493</b>	<b>198</b>	<b>276</b>	<b>357</b>	<b>504</b>

**Other taxes**

	Current assets		Non-current assets		Current liabilities		Non-current liabilities (*)	
	12.31.2020	12.31.2019	12.31.2020	12.31.2019	12.31.2020	12.31.2019	12.31.2020	12.31.2019
Taxes in Brazil								
Current / Non-current ICMS (VAT)	507	555	293	364	642	759	-	-
Current / Non-current PIS and COFINS	340	417	2,055	2,591	544	252	37	44
Claim to recover PIS and COFINS	-	-	681	820	-	-	-	-
PIS and COFINS - exclusion of ICMS (VAT tax) from the basis of calculation	1,230	-	-	-	-	-	-	-
CIDE	4	31	-	-	41	45	-	-
Production taxes	-	-	-	-	1,173	1,929	94	266
Withholding income taxes	-	-	-	-	106	232	-	-
Others	87	31	119	153	117	189	275	225
Total in Brazil	2,168	1,034	3,148	3,928	2,623	3,406	406	535
Taxes abroad	9	17	10	11	13	18	-	-
<b>Total</b>	<b>2,177</b>	<b>1,051</b>	<b>3,158</b>	<b>3,939</b>	<b>2,636</b>	<b>3,424</b>	<b>406</b>	<b>535</b>

(\*) Other non-current taxes are classified as other non-current liabilities.

Income taxes within current assets refer mainly to tax credits resulting from the computation process of IRPJ and CSLL, in addition to the negative balance relating to 2018 and 2019.

Current and non-current ICMS (VAT) credits arise from requests for extemporaneous and overpaid tax, offset in accordance with the legislation of each state, on average within three years. They also arise on the acquisition of assets for property, plant and equipment, which are offset in a straight line over 4 years.

Current and non-current PIS/COFINS credits mainly refer to the acquisition of goods and services for assets under construction, since their use is permitted only after these assets enter into production, as well as to extemporaneous tax credits.

Production taxes are financial compensation due to the Brazilian Federal Government by companies that explore and produce oil and natural gas in Brazilian territory. They are composed of royalties, special participations, signature bonuses and payment for retention or occupation of area.

**17.2. Exclusion of ICMS (VAT tax) from the basis of calculation of PIS and COFINS**

In 2020, the Company obtained a favorable and definitive court decision regarding the exclusion of ICMS (VAT tax) in the basis of calculation of sales taxes PIS and COFINS, recognizing US\$ 3,226 (R\$ 16,764 million) as other recoverable taxes. These sales taxes credits refer to the ICMS included in the basis of calculation of PIS and COFINS, from October 2001 to August 2020, inappropriately paid during this period.

The Company recognized this credit as the realization of income was virtually certain and the inflow of economic benefits was highly probable, since: (i) the final decision in 2020 (with no possibility of appeal) constitutes a right that is no longer contingent at the date of that decision; and (ii) the measurement methodology adopted is accepted by the Federal Revenue of Brazil, resulting in an amount to be recovered by the Company.

Thus, a US\$ 2,050 gain for the recovery of taxes was accounted for within other income and expenses, a US\$ 1,516 gain for the inflation indexation within net finance income (expense). In addition, the Company accounted for an US\$ 78 expense within other taxes and an US\$ 1,097 expense within income taxes.

In 2020, the Company compensated US\$ 1,857 (R\$ 10,372 million) on the payment of federal taxes. As of December 31, 2020, the unused credit, updated by the SELIC interest rate, amounts to US\$ 1,230 (R\$ 6,392 million).

**Recovery of PIS and COFINS**

The Company filed civil lawsuits against the Brazilian Federal Government claiming to recover PIS and COFINS paid over finance income and foreign exchange variation gains, from February 1999 to January 2004.

The court granted to the Company, in all the lawsuits, the definitive right to recover those taxes, but it requires previous examination and approval by the court of the settlement reports (court-ordered liquidation stage). In 2017, there were a settlement reports issued in favor of the Company relating to the most significant amount to be recovered. However, final approvals by the court are still pending.

As of December 31, 2020, the Company had non-current receivables of US\$ 681 (US\$ 820 as of December 31, 2019) related to PIS and COFINS, which are indexed to inflation.

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### 17.3. Tax amnesty programs – State Tax

In 2020, Petrobras adhered to state amnesty programs that resulted in the payment of US\$ 359, of which US\$ 347 was recognized as other taxes, US\$ 29 as finance expenses, and the balance as cumulative translation adjustments.

A summary of the agreements is presented below:

State	State Law/Decree n°	Benefits received	Claimed Amount (*)	Reduction Benefit	Amount paid after benefit
RJ	9,041/2020	Reduction of 90% of interest and 90% of the fines related to tax credits	551	(230)	321
ES	4,709-R/2020	50% of tax remission, 90% of fines and interest	139	(104)	35
	71,800/2020	Reduction of 95% of fines and interest			
AL	72,199/2020	50% of tax remission and, 90% of fines and interest	6	(5)	1
SE	40,691/2020	Reduction of 90% of fines and interest	3	(2)	1
RN	10,784/2020	Reduction of 95% of fines and interest	2	(1)	1
			701	(342)	359

(\*) US\$ 565 refers to previous disputes for which the likelihood of losses were deemed possible and US\$ 125 refers to self-denunciation. (RJ).

#### State of Rio de Janeiro

On October 1, 2020, the Company's Board of Directors approved an agreement with the tax authority of the state of Rio de Janeiro aiming at reducing fines and interest on taxes claimed by the state. The agreement, based on ICMS Agreement 51/2020 and Law RJ 9,041 / 2020, allows a 90% reduction of the amounts due as fine and interest, resulting in a disbursement by Petrobras to the state of Rio de Janeiro of US\$ 321.

This agreement allowed the settlement of contingencies related to the collection of ICMS and fines in the domestic consumption operations of diesel oil used by the maritime units chartered by the Company, considering the approval, in the same legal provision, with a reduction in the tax burden in internal supplies of marine diesel oil, instead of the previous rate of 12%, reaching a definitive solution to the cause of these contingencies. The disbursement was made in installments, having been fully settled, in accordance with the 2020 Terms of Adjustment of Tax Conduct entered into with the State of Rio de Janeiro.

#### State of Espírito Santo

On October 1, 2020, the Board of Directors approved the adherence to a remission and amnesty program with the State of Espírito Santo, entered into under the terms of the ICMS Agreement 146/2019 and Decree 4,709-R / 2020, payment of US\$ 35 in October 2020, to settle tax claims arising from differences in the appropriation of ICMS credits on property, plant and equipment and from differences in ICMS in oil and oil products operations. In addition, the presumed ICMS credit system was implemented, based on the ICMS the agreement, providing a definitive solution to this dispute.

### 17.4. Reconciliation between statutory income tax rate and effective income tax rate

The following table provides the reconciliation of Brazilian statutory tax rate to the Company's effective rate on income before income taxes:

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	2020	2019	2018
Net income before income taxes	(226)	12,003	10,827
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	77	(4,081)	(3,681)
· Tax benefits from the deduction of interest on capital distribution	(16)	728	553
· Different jurisdictional tax rates for companies abroad	1,874	1,056	355
· Brazilian income taxes on income of companies incorporated outside Brazil (*)	(743)	(175)	(41)
· Tax incentives	(9)	443	74
· Tax loss carryforwards (unrecognized tax losses)	(428)	(682)	(484)
· Agreement with US authorities	-	-	(293)
· Non-taxable income (non-deductible expenses), net (**)	(280)	(1,556)	(780)
· Expenses with post-employment medical benefits (***)	559	(417)	(367)
· Results of equity-accounted investments in Brazil and abroad	49	53	184
· Others	91	431	224
<b>Income taxes expense</b>	<b>1,174</b>	<b>(4,200)</b>	<b>(4,256)</b>
Deferred income taxes	1,743	(2,798)	(370)
Current income taxes	(569)	(1,402)	(3,886)
<b>Total</b>	<b>1,174</b>	<b>(4,200)</b>	<b>(4,256)</b>
Effective tax rate of income taxes	519.5%	35.0%	39.3%

(\*) It relates to Brazilian income taxes on earnings of offshore investees, as established by Law No. 12,973/2014.

(\*\*) It includes provisions for legal proceedings.

(\*\*\*) This plan was revised in 2020, as set out in note 19.5.

## 17.5. Deferred income taxes - non-current

The changes in the deferred income taxes are presented as follows:

	2020	2019
<b>Balance at January 1</b>	<b>(372)</b>	<b>2,026</b>
Recognized in the statement of income for the period	1,743	(2,798)
Recognized in the statement of income of discontinued operation	-	(612)
Recognized in shareholders' equity	5,564	1,617
Cumulative translation adjustment	(623)	58
Use of tax credits	(60)	(329)
Transfers to held for sale	4	(276)
Others	-	(58)
<b>Balance at December</b>	<b>6,256</b>	<b>(372)</b>
Deferred tax assets	6,451	1,388
Deferred tax liabilities	(195)	(1,760)
<b>Balance at December</b>	<b>6,256</b>	<b>(372)</b>

The composition of deferred tax assets and liabilities as of December 31 is set out in the following table:

Nature	Realization basis	2020	2019
Exploration and decommissioning costs	Depreciation, amortization and write-offs of assets	(3,205)	(5,508)
Impairment	Amortization, impairment reversals and write-offs of assets	6,626	6,280
Others	Depreciation, amortization and write-offs of assets	(8,690)	(9,868)
Loans, trade and other receivables / payables and financing	Payments, receipts and considerations	3,913	1,349
Finance leases	Depreciation	1,190	189
Provision for legal proceedings	Payments and use of provisions	664	782
Tax loss carryforwards	30% of taxable income compensation	2,501	2,511
Inventories	Sales, write-downs and losses	158	630
Employee Benefits	Payments and use of provisions	2,882	3,706
Others		217	(443)
<b>Balance at December 31</b>		<b>6,256</b>	<b>(372)</b>
Deferred tax assets		6,451	1,388
Deferred tax liabilities		(195)	(1,760)
<b>Balance at December 31</b>		<b>6,256</b>	<b>(372)</b>

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### 17.6. Timing of reversal of deferred income taxes

Deferred tax assets were recognized based on projections of taxable profit in future periods supported by the Company's 2021-2025 Strategic Plan, aiming at the maximization of returns on capital employed, reduction of cost of capital and search for low costs and efficiencies.

Management considers that the deferred tax assets will be realized to the extent the deferred tax liabilities are reversed and expected taxable events occur based on its 2021-2025 Strategic Plan.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) as of December 31, 2020 is set out in the following table:

	Assets	Liabilities
2021	2,257	49
2022	975	21
2023	764	20
2024	15	19
2025	14	44
2026 and thereafter	2,426	42
<b>Recognized deferred tax assets</b>	<b>6,451</b>	<b>195</b>

In addition, at December 31, 2020, the Company has tax loss carryforwards arising from offshore subsidiaries, for which no deferred taxes were recognized.

	Assets	Liabilities
Brazil	35	2
Abroad	1,369	-
<b>Unrecognized deferred tax assets</b>	<b>1,404</b>	<b>2</b>
<b>Total</b>	<b>7,855</b>	<b>197</b>

These tax losses arose mainly from oil and gas exploration and production and refining activities in the United States of US\$ 1,295 (US\$ 1,346 as of December 31, 2019).

An aging of the unrecognized deferred tax assets from companies abroad is set out below:

	2026 - 2028	2029 - 2031	2032 - 2034	2035 - 2037	Undefined expiration	Total
Unrecognized deferred tax assets	205	708	320	62	74	1,369

### 17.7. Accounting policy for income taxes

Income tax expense for the period includes current and deferred taxes, recognized in the statement of income of the period, except when the tax arises from a transaction or event which is recognized directly in equity. Income tax expense comprises current and deferred taxes based on the rates of 25% for income tax (IRPJ) and 9% for social contribution on net income (CSLL), and the offsetting of the carryforward of credit losses and negative basis of CSLL, limited to 30% of taxable income for the year. Since 2015, income tax expenses on profits arising from subsidiaries abroad are recognized as established by Law No. 12,973 / 2014.

#### 17.7.1. Current income taxes

Current income taxes are computed based on taxable profit for the year, determined in accordance with the rules established by the taxation authorities, using tax rates that have been enacted or substantively enacted at the end of the reporting period.

Current income taxes are offset when they relate to income taxes levied on the same taxable entity and by the same tax authority, when there is a legal right and the entity has the intention to set off current tax assets and current tax liabilities, simultaneously.

### **17.7.2. Deferred income taxes**

Deferred income taxes are recognized on temporary differences between the tax base of an asset or liability and its carrying amount. They are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets are generally recognized for all deductible temporary differences and carryforward of unused tax losses or credits to the extent that it is probable that taxable profit will be available against which those deductible temporary differences can be utilized. When there are insufficient taxable temporary differences relating to the same taxation authority and the same taxable entity, a deferred tax is recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods, based on projections approved by management and supported by the Company's Strategic Plan.

Deferred tax assets and deferred tax liabilities are offset when they relate to income taxes levied on the same taxable entity, when a legally enforceable right to set off current tax assets and current tax liabilities exists and when the deferred tax assets and deferred tax liabilities relate to taxes levied by the same tax authority on the same taxable entity.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***18. Employee benefits**

	12.31.2020	12.31.2019
Voluntary Severance Program (PDV)	900	140
Employees variable compensation program	522	655
Accrued vacation pay	470	660
Salaries and related charges	204	212
Profit sharing	4	16
<b>Total</b>	<b>2,100</b>	<b>1,683</b>
Current	1,953	1,645
Non-current	147	38

**18.1. Voluntary Severance Programs**

As of December 31, 2020, the Company has seven voluntary severance programs (PDV) and one Incentive Retirement Program (PAI), whose enrollment deadline ended in December 2020, totaling 11,117 enrollments:

- i. PDV 2019 for retired employees under the Brazilian Social Security Institute (INSS) by June 2020.
- ii. PDV specific for employees of divestment units;
- iii. PDV exclusively for corporate employees;
- iv. PAI aimed at employees who are eligible to retire under INSS;
- v. PDV for employees of wholly owned subsidiary Transpetro;
- vi. PDV for employees of wholly owned subsidiary PBIO; and
- vii. PDV for employees of subsidiary TBG.

Recognition of the provision for expenses occur as employees enroll to the programs. Changes in the provision for expenses relating to voluntary severance programs implemented by the Company are set out as follows:

	12.31.2020	12.31.2019
Opening Balance	140	35
Discontinued operations	-	(21)
Enrollments	1,076	200
Revision of provisions	(59)	(2)
Separations in the period	(245)	(71)
Cumulative translation adjustment	(12)	(1)
<b>Closing Balance</b>	<b>900</b>	<b>140</b>
Current	754	98
Non-current	146	42

On April 7, 2020, the Board of Directors approved adjustments to the current programs, triggering an additional provision amounting to US\$ 311, relating to the employees enrolled by June 2020. On the same date, it also approved a new severance program aimed at employees who are eligible to retire under the public pension program (PAI) and, after the promulgation of the public pension reform in the second half of 2019, were unable to participate in PDV 2019 (enrollments from May 6 to July 31, 2020).

The Company chose to disburse the severance payments in two installments, one at the time of termination and the other in July 2021 or one year after the termination, whichever is later, and expects to disburse US\$ 754 in 2021, US\$ 128 in 2022 and US\$ 18 in 2023.

## **18.2. Variable compensation program - Performance award program (PPP)**

On January 21, 2021, the Company's Board of Administration approved changes in the criteria for granting PPP 2020 to employees (in relation to regulation approved on April 28, 2020).

The regulation for this variable compensation program establishes that, in order to trigger this payment, it is necessary to have net income for the year, excluding impairment losses and foreign exchange gains (losses) from this calculation, associated with the achievement of the Company's performance metrics and the individual performance of employees and results of the departments.

The PPP for 2020 amounts to US\$ 435 (US\$ 645 for 2019) and was approved by the Company's Board of Directors in a meeting held on January 26, 2021, accounted for within other income and expenses.

## **18.3. Profit sharing (PLR)**

At December 21, 2020, the 17 unions representing onshore employees of the Parent Company had signed the agreement for the PLR for the next two years before the deadline determined by the Collective Labor Agreement (ACT). Among the offshore employees, only one union had signed the agreement within the period defined by the ACT.

The current agreement for the PLR provides that only employees without managerial functions will be entitled to receive profit sharing, and it will be cumulative to the payment of the PPP.

In order for the PLR to be paid in the next two years, the following requirements must be met: (i) dividend distribution to shareholders approved by the Board of Directors, (ii) net income for the year, and (iii) achievement of the weighted average percentage of at least 80% of a set of indicators.

The maximum amount of PLR to be distributed is limited to 6.25% of net income and 25% of dividends distributed to shareholders, in each year. There was no PLR expense for 2020 (US\$ 43 for 2019 and US\$ 442 for 2018).

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### 19. Employee benefits (post-employment)

	12.31.2020	12.31.2019
<b>Liabilities</b>		
AMS Medical Plan	5,356	11,986
Petros Pension Plan - Renegotiated (PPSP-R)	6,016	10,231
Petros Pension Plan - Non-renegotiated (PPSP-NR)	1,621	3,264
Petros Pension Plan - Renegotiated - Pre-70	1,508	-
Petros Pension Plan - Non-renegotiated - Pre-70	1,075	-
Petros 2 Pension Plan	477	989
Other plans	16	24
<b>Total</b>	<b>16,069</b>	<b>26,494</b>
Current	1,549	887
Non-current	14,520	25,607
<b>Total</b>	<b>16,069</b>	<b>26,494</b>

(\*) It includes obligations with contribution for the revision of the lump sum death benefit (see note 19.2.1).

#### 19.1. AMS Medical Plan

The Company maintains a healthcare plan for its employees in Brazil (active and retired) and their dependents: the AMS Medical Plan. The plan is managed by the Company and includes health prevention and health care programs. The plan is mainly exposed to the risk of an increase in medical costs due to new technologies, new types of coverage and to a higher level of usage of medical benefits. The Company continuously improves the quality of its technical and administrative processes, as well as the health programs offered to beneficiaries in order to mitigate such risks.

The employees make fixed monthly contributions to cover high-risk procedures and variable contributions for a portion of the cost of the other procedures, both based on the contribution tables of the plan, which are determined based on certain parameters, such as salary and age levels. The plan also includes assistance towards the purchase of certain medicines through reimbursement, with co-participation of the employees. There are no health care plan assets.

Benefits are paid by the Company based on the costs incurred by the participants. The financial participation of the Company and the beneficiaries on the expenses are provided for in the collective bargaining agreement, as follows:

- i) Until 2020, this benefit was covered 70% by the Company and 30% by the participants;
- ii) As from January 2021, this benefit will be covered 60% by the Company and 40% by the participants;
- iii) As of January 2022, this benefit will be covered 50% by the Company and 50% by the participants, in compliance to the Resolution No. 23 of Commission for Corporate Governance and Administration of Participations of the Brazilian Federal Government (CGPAR).

In case of a change or revocation of CGPAR Resolution No. 23, as a result of legal acts issued by the Brazilian Federal Government or the Brazilian Congress, the Company pre-agreed with the unions that the proportion will remain 60%- 40%, until further adjustment between the parties.

As of December 31, 2020, considering that changes in the AMS Plan costing proportion brought by the current collective bargaining agreement led to a change in the liabilities, the Company recognized a US\$ 2,538 gain relating to past service cost, of which a portion was recognized in service cost (related to active participants) and other portion was recognized in other income and expenses (related to assisted and retired participants).

The average duration of the actuarial liability related to this plan, already considering the changes on the participation of the Company and the participants, as of December 31, 2020, is 15.26 years (21.64 as of December 31, 2019).

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### 19.1.1. New healthcare management model

On April 28, 2020, the Company's Board of Directors approved a new management model for AMS. The management of this plan will now be carried out by a nonprofit civil association, nominated Petrobras Saúde, also through the self-management type, in accordance with the requirements of the National Supplementary Health Agency (*Agência Nacional de Saúde Suplementar - ANS*).

This change will generate no change in benefit, coverage or scope on the plan, as well as no accounting effects.

Currently, the association is in the process of obtaining the required qualifications and registers for its operation, with an expected implementation of the new model in the first quarter of 2021.

### 19.2. Pension plans

The Company's post-retirement plans are managed by Fundação Petrobras de Seguridade Social (Petros Foundation), which was established by Petrobras as a nonprofit legal entity governed by private law with administrative and financial autonomy.

#### 19.2.1. Renegotiated and Non-renegotiated Petros Plans (PPSP-R and PPSP-NR)

These plans were established by Petrobras in July 1970 (originally solely Petros Plan) as a defined-benefit pension plan, in order to complement government social security benefits. The Petros Plan is closed to new participants since September 2002.

Petros Foundation performs an annual actuarial review of its costs using the capitalization method for most benefits. The employers (sponsors) make regular contributions in amounts equal to the contributions of the participants (active employees, assisted employees and retired employees), on a parity basis. Exceptionally in 2020, there was also an intermediate remeasurement of the actuarial liabilities for these plans, following the approval of the New PED.

#### New Deficit Settlement Plan (New PED)

On April 28, 2020, the New Deficit Settlement Plan for the PPSP-R and PPSP-NR (New PED) was approved by the Secretariat of Management and Governance of the State-owned Companies (SEST) and by the Superintendency of Post-retirement Benefits (PREVIC), also approving changes in regulation regarding the reduction of the lump sum death benefit.

The New PED covers 2015 and 2018 deficits and incorporates 2019 results. Total settlement amounts to US\$ 6,485 (R\$ 33.7 billion). Of the total amount, US\$ 3,006 (R\$ 15,620 million) will be paid by Petrobras, in compliance with contributory parity provided for by relevant legislation, of which US\$ 2,611 (R\$ 13,566 million) will be paid through lifelong additional contributions and US\$ 395 (R\$ 2,054 million) as a counterpart contribution for the reduction of the lump sum death benefit.

This counterpart contribution will be paid in 40 semiannual installments for a period of 20 years, updated based on the fixed actuarial target of the plans, revised annually. As of December 31, 2020, the updated balance of this Company's obligation amounted to US\$ 444 (R\$ 2,206 million).

The rest of the deficit will be paid by other sponsors and participants of the PPSP-R and PPSP-NR plans.

The current model differs from that applied in PED-2015, aiming at reducing the additional contributions of most of the participants by: (i) extending the collection time from 18 years to a lifetime; (ii) specific fixed contribution rates for active and assisted employees; (iii) the implementation of an annual contribution of 30% on the 13th salary; and (iv) the reduction in the amount of the lump sum death benefit.

The New PED sets forth changes in some rights and regulation of the PPSP-R and PPSP-NR, in accordance with Resolution No. 25 of CGPAR, which establishes guidelines and parameters for federal state companies regarding the sponsorship of pension plans.

In May 2020, following the approval of the New PED and based on relevant regulation, the Company made an intermediate remeasurement of the actuarial liabilities of the PPSP-R and PPSP-NR plans, with a US\$ 10 gain in profit or loss, as a net effect of a US\$ 374 gain for the reduction on the lump sum death benefit, as well as other changes in the regulation of these plans, partially offset by a US\$ 364 loss related to the contribution for the settlement of the deficit.

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Changes in the cost of past service results from the changes in the regulations of the plans, mainly the reduction on the lump sum death benefit, retirement independent from being retired by the INSS, as well as the establishment of a reference unit for the plan (UR), which sets a single value of US\$ 0.7 thousand (R\$ 4 thousand), adjusted annually by the IPCA (National Consumer Price Index), to determine the value of the Petros supplementation, replacing the previous rule which was based on an estimation of INSS retirement of active participants without acquired rights (active employees who did not retire by INSS before the amendment to the regulation). For information on the annual remeasurement of the actuarial liabilities, see note 19.3.b.

The average durations of the actuarial liability related to PPSP-R and PPSP-NR plans, as of December 31, 2020, are 12.43 and 11.51 years, respectively (13.78 and 11.05 as of December 31, 2019).

The employers' expected contributions to PPSP-R and PPSP-NR plans for 2021 are US\$ 240 and US\$ 74, respectively.

### 19.2.2. Renegotiated and Non-renegotiated Petros Plans - Pre-70 (PPSP-R Pre-70 and PPSP-NR Pre-70)

The Renegotiated Petros Plan Pre-70 (PPSP-R Pre-70) and Non-renegotiated Petros Plan Pre-70 (PPSP-NR Pre-70) are defined benefit plans derived from the split of the PPSP-R and PPSP-NR plans, established on January 1 2020.

The Pre-70 Group is made up of Petrobras employees and former employees hired prior to July 1, 1970, who enrolled in the PPSP until January 1, 1996 and remained continuously linked to the original sponsor obtaining the condition of assisted.

According to these plans rules, Petrobras is responsible for any deficits, given the Term of Financial Commitment (TCF) between Petrobras and Petros Foundation, which exempts the participants from paying any extraordinary contributions in case of deficit.

The average durations of the actuarial liability related to PPSP-R Pre-70 and PPSP-NR Pre-70 plans, as of December 31, 2020, are 8.85 and 8.62 years, respectively.

### Term of Financial Commitment - TFC

As of December 31, 2020, the balance of the TFC, signed by Petrobras and Petros Foundation in 2008, to cover obligations with defined benefits plans is presented as follows:

	12.31.2020
<b>Liabilities</b>	
Petros Pension Plan - Renegotiated Pre-70 (PPSP-R Pre-70) (*)	1,254
Petros Pension Plan - Non-renegotiated - Pre-70 (PPSP-NR Pre-70) (*)	808
Petros Pension Plan - Renegotiated (PPSP-R)	465
<b>Total</b>	<b>2,527</b>

(\*) Includes the amendment to the TFC Pre-70, amounting to US\$ 210, of which US\$ 101 relates to PPSP-R Pre-70 and US\$ 109 to PPSP-NR Pre-70.

These amounts are due in 20 years, with 6% p.a. semiannual coupon payments based on the updated balance. As of December 31, 2020, the Company has provided crude oil and oil products pledged as security for the TFC totaling US\$ 2,750 (US\$ 3,525 as of December 31, 2019). The TFC is accounted for in the pension and medical benefits liabilities, within the statement of financial position.

On January 15, 2021, the Company prepaid the remaining balance of TFC relating to Pre-70 plans, in the amount of US\$ 865 (R\$ 4,493 million), of which US\$ 468 relates to the PPSP-R Pre-70 and US\$ 397 to the PPSP-NR Pre-70. As a result, the amount of collateral is under revision.

The amount of interests expected to be paid in 2021 relating to this commitment is US\$ 97.

### 19.2.3. Petros 2 Plan

Petros 2 Plan was established in July 2007 by Petrobras as a variable contribution plan, currently open to new enrollments.

Certain elements of the Petros 2 Plan have defined benefit characteristics, primarily the coverage of disability and death risks and the guarantee of minimum defined benefit and lifetime income. These actuarial commitments are treated as defined

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benefit components of the plan and are accounted for by applying the projected unit credit method. Contributions paid for actuarial commitments that have defined contribution characteristics are accrued monthly in the statement of income and are intended to constitute a reserve for programmed retirement. The Company's contributions for the portion of the plan with defined contribution characteristics were US\$ 177 in 2020 (US\$ 242 in 2019 and US\$ 260 in 2018).

The defined benefit portion of the contributions are suspended from July 1, 2012 to June 30, 2021, as determined by the Executive Council of Petros Foundation, based on advice of the actuarial consultants from Petros Foundation. Therefore, the entire contributions are being applied to the individual accounts of plan participants.

For 2021, the sponsors' expected contributions to the defined contribution portion of the plan are US\$ 188.

The average duration of the actuarial liability related to the plan, as of December 31, 2020 is 22.07 years (23.34 at December 31, 2019).

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**19.3. Net actuarial liabilities and expenses, and fair value of plans assets**
**a) Changes in the actuarial liabilities recognized in the statement of financial position**

						2020
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2	AMS	Other plans	Total
<b>Amounts recognized in the Statement of Financial Position</b>						
Present value of obligations	15,847	4,811	1,177	5,356	26	27,217
(-) Fair value of plan assets	(8,650)	(2,213)	(700)	-	(12)	(11,575)
<b>Net actuarial liability as of December 31,</b>	<b>7,197</b>	<b>2,598</b>	<b>477</b>	<b>5,356</b>	<b>14</b>	<b>15,642</b>
<b>Changes in the net actuarial liability</b>						
<b>Balance as of January 1,</b>	<b>10,231</b>	<b>3,264</b>	<b>989</b>	<b>11,986</b>	<b>24</b>	<b>26,494</b>
<b>Recognized in the Statement of Income</b>	<b>84</b>	<b>40</b>	<b>131</b>	<b>(1,672)</b>	<b>2</b>	<b>(1,415)</b>
Costs incurred in the period	(298)	(93)	64	(2,348)	-	(2,675)
Service cost	382	133	67	676	2	1,260
<b>Recognized in Equity - other comprehensive income</b>	<b>(344)</b>	<b>285</b>	<b>(391)</b>	<b>(1,957)</b>	<b>(8)</b>	<b>(2,415)</b>
Remeasurement effects recognized in other comprehensive	(344)	285	(391)	(1,957)	(8)	(2,415)
<b>Cash effects</b>	<b>(474)</b>	<b>(265)</b>	<b>-</b>	<b>(308)</b>	<b>(1)</b>	<b>(1,048)</b>
Contributions paid	(255)	(80)	-	(308)	(1)	(644)
Payments related to Term of financial commitment (TFC)	(219)	(185)	-	-	-	(404)
<b>Other changes</b>	<b>(2,300)</b>	<b>(726)</b>	<b>(252)</b>	<b>(2,693)</b>	<b>(3)</b>	<b>(5,974)</b>
Others	-	-	-	-	2	2
Cumulative Translation Adjustment	(2,300)	(726)	(252)	(2,693)	(5)	(5,976)
<b>Balance of actuarial liability as of December 31,</b>	<b>7,197</b>	<b>2,598</b>	<b>477</b>	<b>5,356</b>	<b>14</b>	<b>15,642</b>
Obligations with contribution for the revision of the lump sum	315	99	-	-	-	414
Cumulative Translation Adjustment	12	(1)	-	-	2	13
<b>Total obligation with pension and medical benefits</b>	<b>7,524</b>	<b>2,696</b>	<b>477</b>	<b>5,356</b>	<b>16</b>	<b>16,069</b>

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(\*\*) It includes the gain from past service cost, in the amount of US\$ 374, due to the change in the Renegotiated and Non-renegotiated Petros Plans, and US\$ 2,538 due to the change in the AMS Medical Plan.

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						2019
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2	AMS	Other plans	Total
<b>Amounts recognized in the Statement of Financial Position</b>						
Present value of obligations	20,919	5,955	1,672	11,986	37	40,569
(-) Fair value of plan assets	(10,688)	(2,691)	(683)	-	(13)	(14,075)
<b>Net actuarial liability as of December 31,</b>	<b>10,231</b>	<b>3,264</b>	<b>989</b>	<b>11,986</b>	<b>24</b>	<b>26,494</b>
<b>Changes in the net actuarial liability</b>						
<b>Balance as of January 1,</b>	<b>7,152</b>	<b>2,880</b>	<b>411</b>	<b>12,236</b>	<b>71</b>	<b>22,750</b>
<b>Recognized in the Statement of Income</b>						
Costs incurred in the period	51	6	40	208	2	307
Service cost	510	205	35	1,024	5	1,779
<b>Recognized in Equity - other comprehensive income</b>						
Remeasurement effects recognized in other comprehensive	4,155	815	527	89	3	5,589
<b>Cash effects</b>						
Contributions paid	(340)	(107)	-	(442)	(7)	(896)
Payments related to Term of financial commitment (TFC)	(717)	(269)	-	-	-	(986)
<b>Other changes</b>						
Discontinued operations	(399)	(176)	(17)	(651)	(1)	(1,244)
Others	-	-	-	-	(48)	(48)
Cumulative Translation Adjustment	(181)	(90)	(7)	(478)	(1)	(757)
<b>Balance of actuarial liability as of December 31,</b>	<b>10,231</b>	<b>3,264</b>	<b>989</b>	<b>11,986</b>	<b>24</b>	<b>26,494</b>

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

**b) Present value of the obligation**

At December 31, 2020, a US\$ 3,762 gain was accounted for in Equity, within other comprehensive income, arising from the effect of updated premises on the present value of the obligations of benefit plans, as set out as follows:

						2020
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2	AMS	Other plans	Total
<b>Changes in the present value of obligations</b>						
<b>Present value of obligations at the beginning of the year</b>	<b>20,919</b>	<b>5,955</b>	<b>1,672</b>	<b>11,986</b>	<b>37</b>	<b>40,569</b>
<b>Recognized in the Statement of Income</b>						
Interest expense	887	283	112	676	3	1,961
Service cost (**)	(298)	(93)	64	(2,348)	-	(2,675)
<b>Recognized in Equity - other comprehensive income</b>						
Remeasurement: Experience (gains) / losses (***)	(436)	231	55	(671)	-	(821)
Remeasurement: (gains) / losses - demographic assumptions	-	-	(20)	1	1	(18)
Remeasurement: (gains) / losses - financial assumptions	288	(20)	(263)	(1,287)	(8)	(1,290)
<b>Others</b>	<b>(5,513)</b>	<b>(1,545)</b>	<b>(443)</b>	<b>(3,001)</b>	<b>(7)</b>	<b>(10,509)</b>
Benefits paid	(920)	(228)	(35)	(310)	(2)	(1,495)
Contributions paid by participants	75	15	-	-	-	90
Others	-	-	-	-	2	2
Cumulative Translation Adjustment	(4,668)	(1,332)	(408)	(2,691)	(7)	(9,106)
<b>Present value of obligations at the end of the year</b>	<b>15,847</b>	<b>4,811</b>	<b>1,177</b>	<b>5,356</b>	<b>26</b>	<b>27,217</b>

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(\*\*) It includes the gain from past service cost, in the amount of US\$ 374, due to the change in the Renegotiated and Non-renegotiated Petros Plans, and US\$ 2,538 due to the change in the AMS Medical Plan.

(\*\*\*) It includes additional contributions - New PED.

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						2019
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2	AMS	Other plans	Total
<b>Changes in the present value of obligations</b>						
<b>Present value of obligations at the beginning of the year</b>	16,689	5,372	996	12,236	112	35,405
<b>Recognized in the Statement of Income</b>	1,408	437	122	1,232	8	3,207
Interest expense	1,357	431	83	1,024	6	2,901
Service cost	51	6	39	208	2	306
<b>Recognized in Equity - other comprehensive income</b>	5,254	1,033	670	89	5	7,051
Remeasurement: Experience (gains) / losses (**)	1,165	17	(34)	(2,489)	(7)	(1,348)
Remeasurement: (gains) / losses - demographic assumptions	45	59	(43)	(169)	(1)	(109)
Remeasurement: (gains) / losses - financial assumptions	4,044	957	747	2,747	13	8,508
<b>Others</b>	<b>(2,432)</b>	<b>(887)</b>	<b>(116)</b>	<b>(1,571)</b>	<b>(88)</b>	<b>(5,094)</b>
Discontinued operations	(892)	(304)	(58)	(651)	-	(1,905)
Benefits paid	(1,097)	(420)	(33)	(442)	(2)	(1,994)
Contributions paid by participants	82	16	-	-	-	98
Others	-	-	-	-	(84)	(84)
Cumulative Translation Adjustment	(525)	(179)	(25)	(478)	(2)	(1,209)
<b>Present value of obligations at the end of the year</b>	<b>20,919</b>	<b>5,955</b>	<b>1,672</b>	<b>11,986</b>	<b>37</b>	<b>40,569</b>

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(\*\*) It includes additional contributions - PED 2015.

						2020	2019
			Pension Plan	Medical Plan			
	Petros Renegotiated	Petros Non - renegotiated	Petros 2	AMS	Other Plans	Total	Total
Up to 1 Year	879	312	31	261	1	1,484	1,923
1 to 5 Years	3,306	1,119	149	866	4	5,444	9,305
6 to 10 Years	3,474	1,135	145	996	5	5,755	8,046
11 To 15 Years	3,290	778	145	859	5	5,077	6,459
Over 15 Years	4,898	1,467	707	2,374	11	9,457	14,836
<b>Total</b>	<b>15,847</b>	<b>4,811</b>	<b>1,177</b>	<b>5,356</b>	<b>26</b>	<b>27,217</b>	<b>40,569</b>

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

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**c) Fair value of plan assets**

						2020
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2	AMS	Other plans	Total
<b>Changes in the fair value of plan assets</b>						
<b>Fair value of plan assets at the beginning of the year</b>	10,688	2,691	683	–	13	14,075
<b>Recognized in the Statement of Income</b>	505	150	45	–	1	701
Interest income	505	150	45	–	1	701
<b>Recognized in Equity - other comprehensive income</b>	196	(74)	163	–	1	286
Remeasurement: Return on plan assets due to lower interest income	196	(74)	163	–	1	286
<b>Cash effects</b>	474	265	–	308	1	1,048
Contributions paid by the sponsor (Company) (*)	255	80	–	308	1	644
Term of financial commitment (TFC) paid by the Company	219	185	–	–	–	404
<b>Other Changes</b>	(3,213)	(819)	(191)	(308)	(4)	(4,535)
Contributions paid by participants	75	15	–	–	–	90
Benefits Paid	(920)	(228)	(35)	(310)	(2)	(1,495)
Others	–	–	–	–	–	–
Cumulative Translation Adjustment	(2,368)	(606)	(156)	2	(2)	(3,130)
<b>Fair value of plan assets at the end of the year</b>	8,650	2,213	700	–	12	11,575

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

						2019
			Pension Plans	Medical Plan		
	Petros Renegotiated (*)	Petros Non- renegotiated (*)	Petros 2		Other plans	
<b>Changes in the fair value of plan assets</b>						
<b>Fair value of plan assets at the beginning of the year</b>	9,537	2,492	585	–	41	12,655
<b>Recognized in the Statement of Income</b>	847	226	48	–	2	1,123
Interest income	847	226	48	–	2	1,123
<b>Recognized in Equity - other comprehensive income</b>	1,099	218	143	–	2	1,462
Remeasurement: Return on plan assets due to lower interest income	1,099	218	143	–	2	1,462
<b>Cash effects</b>	1,067	381	–	442	7	1,897
Contributions paid by the sponsor (Company) (*)	342	108	–	442	7	899
Term of financial commitment (TFC) paid by the Company	725	273	–	–	–	998
<b>Other Changes</b>	(1,862)	(626)	(93)	(442)	(39)	(3,062)
Discontinued operations	(493)	(128)	(42)	–	–	(663)
Contributions paid by participants	82	16	–	–	–	98
Benefits Paid	(1,097)	(420)	(33)	(442)	(2)	(1,994)
Others	–	–	–	–	(36)	(36)
Cumulative Translation Adjustment	(354)	(94)	(18)	–	(1)	(467)
<b>Fair value of plan assets at the end of the year</b>	10,688	2,691	683	–	13	14,075

(\*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

Seeking to maintain an appropriate investment performance, Petros Foundation annually prepares Investment Policies (PI) specific to each plan, aiming at planning assets management for a period of five years, following two models: (i) for defined benefit plans, the minimal mismatch in net cash flows, conditioned to the achievement of the actuarial target; and (ii) for the variable contribution plan, the achievement of the actuarial goal with the lowest value at risk. The plan asset portfolio must comply with the rules defined by the Brazilian National Monetary Council.

The Company uses the ATM - Asset and Liability Management model to resolve mismatches in the net cash flow of the benefit plans managed by Petros Foundation, considering parameters of liquidity and solvency, adopting a 30-year horizon in the simulations.

## NOTES TO THE FINANCIAL STATEMENTS

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### d) Pension Plan assets

Pension plans assets follow a long term investment strategy based on the risks assessed for each different class of assets and provide for diversification, in order to lower portfolio risk. The portfolio profile must comply with the Brazilian National Monetary Council (*Conselho Monetário Nacional – CMN*) regulations.

Petros Foundation establishes investment policies for 5-year periods, reviewed annually. Petros uses an asset liability management model (ALM) to address net cash flow mismatches of the benefit plans, based on liquidity and solvency parameters, simulating a 30-year period.

The pension plan assets by type of asset are set out as follows:

Type of asset	2020				2019	
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value	%
Receivables	-	847	847	8%	963	7%
<b>Fixed income</b>	4,372	2,814	7,186	62%	8,786	62%
Government bonds	4,372	452	4,824	-	6,179	-
Fixed income funds	-	1,500	1,500	-	1,608	-
Other investments	-	862	862	-	999	-
<b>Variable income</b>	2,377	137	2,514	21%	2,905	21%
Common and preferred shares	2,377	-	2,377	-	2,753	-
Other investments	-	137	137	-	152	-
<b>Structured investments</b>	3	110	113	1%	185	1%
<b>Real estate properties</b>	-	563	563	5%	767	5%
	<b>6,752</b>	<b>4,471</b>	<b>11,223</b>	<b>97%</b>	<b>13,606</b>	<b>97%</b>
Loans to participants	-	352	352	3%	469	3%
<b>Total</b>	<b>6,752</b>	<b>4,823</b>	<b>11,575</b>	<b>100%</b>	<b>14,075</b>	<b>100%</b>

Loans to participants are measured at amortized cost, which is considered an appropriate estimate of fair value.

As of December 31, 2020, the investment portfolio included debentures of US\$ 9 (US\$ 11 in 2019), Company's common shares in the amount of US\$ 1 (US\$ 1 in 2019) and real estate properties leased by the Company in the amount of US\$ 254 (US\$ 342 in 2019).

### e) Net expenses relating to benefit plans

			Pension Plans			Medical Plan	2020	2019	2018
	Petros Renegotiated (*)	Petros Non-renegotiated (*)	Petros 2	AMS	Other Plans	Total	Total	Total	
Present value of obligations	589	190	176	(1,672)	3	(714)	3,209	3,275	
Fair value of plan assets	(505)	(150)	(45)	-	(1)	(701)	(1,123)	(1,257)	
Obligations with contribution for the revision of the lump sum death benefit	315	99	-	-	-	414	-	-	
<b>Net expenses for the year</b>	<b>399</b>	<b>139</b>	<b>131</b>	<b>(1,672)</b>	<b>2</b>	<b>(1,001)</b>	<b>2,086</b>	<b>2,018</b>	
Related to active employees	66	15	112	(276)	-	(83)	715	617	
Related to retired employees (**)	333	124	19	(1,396)	2	(918)	1,371	1,401	
<b>Net expenses for the year</b>	<b>399</b>	<b>139</b>	<b>131</b>	<b>(1,672)</b>	<b>2</b>	<b>(1,001)</b>	<b>2,086</b>	<b>2,018</b>	

(\*) It includes the balance of PPSP-R Pre-70 and PPSP-NR Pre-70.

(\*\*) It includes US\$ 889 related to the actuarial remeasurement and US\$ 29 to the update of the obligation with the contribution for the reduction of the lump sum death benefit.

**NOTES TO THE FINANCIAL STATEMENTS**
**PETROBRAS**
*(Expressed in millions of US Dollars, unless otherwise indicated)*
**f) Main actuarial assumptions**

Assumptions	Pension Plans					2020 Medical Plan
	PPSP-R	PPSP-NR	PPSP-R Pré-70	PPSP-NR Pré-70	PP2	AMS
Nominal discount rate (including inflation)(1)	5.83% (05/2020) 7.03% (12/2020)	5.77% (05/2020) 6.97% (12/2020)	6.55%	6.55%	7.44%	7.2%
Nominal expected salary growth (including inflation) (2)	4.75%	4.54%	4.75%	4.54%	6.2%	according to security plan
Expected changes in medical and hospital costs (3)	n/a	n/a	n/a	n/a	n/a	6.17% a 3.90% a.a.
Mortality table	EX-PETROS 2013 (bidecremental)	EX-PETROS 2020 (bidecremental)	EX-PETROS 2016 (bidecremental)	EX-PETROS 2020 (bidecremental)	AT-2012 IAM basic fem 10% smoothed	EX-PETROS 2013 (bidecremental)
Disability table	American group	American group	n/a	n/a	Álvaro Vindas 40% smoothed	Álvaro Vindas 40% smoothed
Mortality table for disabled participants	AT-49 male	AT-49 male	MI 2006, by gender, 20% smoothed	Petros Experience 2014	IAPB 1957 strong, 20% smoothed	AT-49 male
Age of retirement	Male, 56 years / Female, 55 years	Male, 58 years / Female, 56 years	Male, 56 years / Female, 55 years	Male, 58 years / Female, 56 years	1st eligibility	Male, 56 years / Female, 55 years

(1) Inflation reflects market projections: 3.32% for 2021 and converging to 3.9% in 2025 onwards.

(2) Expected salary growth only of Petrobras, the sponsor, based on the Salaries and Benefits Plan.

(3) Decreasing rate, converging in 30 years to the long-term expected inflation. Refers only to Petrobras (sponsor) rate.

**2019**

Assumptions	PPSP-R	PPSP-NR	PPSP-R Pre-70	PPSP-NR Pre-70	PP2	AMS
Nominal discount rate (including inflation)(1)	7.13%	7.10%	6.82%	6.81%	7.30%	7.19%
Nominal expected salary growth (including inflation) (2)	4.61%	4.34%	4.61%	4.34%	6.40%	according to security plan
Expected changes in medical and hospital costs (3)	n/a	n/a	n/a	n/a	n/a	10.46% a 3.50% p.a.
Mortality table	EX-PETROS 2013 (bidecremental)	EX-PETROS 2020 (bidecremental)	EX-PETROS 2016 (bidecremental)	EX-PETROS 2020 (bidecremental)	AT-2000 female, smoothed in a 10%	EX-PETROS 2013 (bidecremental)
Disability table	American group	American group	n/a	n/a	American group reduced by 40%	American group
Mortality table for disabled participants	AT-49 male	AT-49 male	MI 2006, by gender, 20% smoothed	MI 2006, by gender, 20% smoothed	IAPB 1957 strong	AT-49 male
Age of retirement	Male, 56 years / Female, 55 years	Male, 58 years / Female, 56 years	Male, 56 years / Female, 55 years	Male, 58 years / Female, 56 years	1st eligibility	Male, 56 years / Female, 55 years

(1) Inflation reflects market projections: 3.61% for 2020 and converging to 3.5% in 2035 onwards.

(2) Expected salary growth only of Petrobras, the sponsor, based on the Salaries and Benefits Plan.

(3) Decreasing rate, converging in 30 years to the long-term expected inflation. Refers only to Petrobras (sponsor) rate.

## NOTES TO THE FINANCIAL STATEMENTS

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### g) Sensitivity analysis of the defined benefit plans

The effect of a 100 basis points (bps) change in the assumed discount rate and medical cost trend rate is as set out below:

	Discount Rate				Expected change in medical and hospital costs	
	Pension Benefits		Medical Benefits		Medical Benefits	
	+100 bps	-100 bps	+100 bps	-100 bps	+100 bps	-100 bps
Pension Obligation	(2,376)	3,064	(670)	849	857	(652)
Current Service cost and interest cost	(5)	-	(36)	46	114	(81)

### 19.4. Plano Petros 3 (PP-3)

On October 1, 2020, the Board of Directors approved the submission of the PP-3 for analysis by the Secretariat of Management and Governance of the State-owned Companies (SEST) and to the Superintendency of Post-retirement benefits (PREVIC).

The PP-3 is a new pension plan with defined contribution characteristics and will be an exclusive option for voluntary migration of participants from the PPSP-R and PPSP-NR plans, not including pre-70.

The mentioned agencies have approved this plan after adjustments on its regulation, and is expected to begin operating in the second quarter of 2021. Then, the Company will carry out an actuarial review of the original plans to determine the effect of the past service cost, resulting from the reduction of such plans, to be accounted for in the Statement of income.

### 19.5. Accounting policy for post-employment defined benefits

Actuarial commitments related to post-employment defined benefit plans and health-care plans are recognized as liabilities in the statement of financial position based on actuarial calculations which are revised annually by an independent qualified actuary (updating for material changes in actuarial assumptions and estimates of expected future benefits), using the projected unit credit method, net of the fair value of plan assets, when applicable, from which the obligations are to be directly settled. Under the projected credit unit method, each period of service gives rise to an additional unit of benefit entitlement and each unit is measured separately to determine the final obligation. Actuarial assumptions include demographic assumptions, financial assumptions, medical costs estimates, historical data related to benefits paid and employee contributions.

Service cost are accounted for within results and comprises: (i) current service cost, which is the increase in the present value of the defined benefit obligation resulting from employee service in the current period; (ii) past service cost, which is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting from a plan amendment (the introduction, modification, or withdrawal of a defined benefit plan) or a curtailment (a significant reduction by the entity in the number of employees covered by a plan); and (iii) any gain or loss on settlement.

Net interest on the net defined benefit liability (asset) is the change during the period in the net defined benefit liability (asset) that arises from the passage of time. Such interest is accounted for in results.

Remeasurement of the net defined benefit liability (asset) is recognized in shareholders' equity, in other comprehensive income, and comprises: (i) actuarial gains and losses and; (ii) the return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).

The Company also contributes amounts to defined contribution plans, that are expensed when incurred and are computed based on a percentage of salaries.

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## 20. Provisions for legal proceedings

### 20.1. Provisions for legal proceedings, judicial deposits and contingent liabilities

The Company recognizes provisions based on the best estimate of the costs of proceedings for which it is probable that an outflow of resources embodying economic benefits will be required and that can be reliably estimated. These proceedings mainly include:

- Labor claims, in particular: (i) opt-out claims related to a review of the methodology by which the minimum compensation based on an employee's position and work schedule (*Remuneração Mínima por Nível e Regime - RMNR*) is calculated; and (ii) actions of outsourced employees;
- Tax claims including: (i) claims relating to Brazilian federal tax credits applied that were disallowed; and (ii) alleged misappropriation of VAT (ICMS) tax credits; and (iii) fines for non-compliance with accessory tax obligations;
- Civil claims relating to: (i) lawsuits related to contracts; (ii) royalties and special participation charges, including royalties over shale extraction; and (iii) penalties applied by ANP relating to measurement systems.
- Environmental claims mainly regarding: (i) compensation and fines relating to an environmental accident in the State of Paraná in 2000; and (ii) fines relating to the Company's offshore operation.

Provisions for legal proceedings are set out as follows:

Current and Non-current liabilities	12.31.2020	12.31.2019
Labor claims	706	895
Tax claims	488	463
Civil claims	713	1,523
Environmental claims	292	232
<b>Total</b>	<b>2,199</b>	<b>3,113</b>

	2020	2019
Opening Balance	3,113	7,405
Additions, net of reversals	464	1,290
Use of provision	(744)	(5,332)
Accruals and charges	28	233
Transfer to assets held for sale	-	(289)
Others	20	22
Cumulative translation adjustment	(682)	(216)
<b>Closing Balance</b>	<b>2,199</b>	<b>3,113</b>

In preparing its consolidated financial statements for the year ended December 31, 2020, the Company considered all available information concerning legal proceedings in which the Company is a defendant, in order to estimate the amounts of obligations and probability that outflows of resources will be required.

The main reductions in provisions for legal proceedings in 2020 relate to the use of provisions relating to civil claims involving contractual issues, mainly due to agreements made in the period.

### 20.2. Judicial deposits

Judicial deposits made in connection with legal proceedings are set out in the table below according to the nature of the corresponding lawsuits:

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### PETROBRAS

(Expressed in millions of US Dollars, unless otherwise indicated)

Non-current assets	12.31.2020	12.31.2019
Tax	5,154	5,926
Labor	831	1,056
Civil	1,095	1,082
Environmental	113	160
Others	88	12
<b>Total</b>	<b>7,281</b>	<b>8,236</b>

	2020	2019
Opening Balance	8,236	6,711
Additions	937	2,021
Use	(86)	(187)
Accruals and charges	90	329
Transfer to assets held for sale	-	(313)
Others	(4)	(1)
Cumulative translation adjustment	(1,892)	(324)
<b>Closing Balance</b>	<b>7,281</b>	<b>8,236</b>

In the year ended December 31, 2020, the Company made judicial deposits in the amount of US\$ 937, including: (i) US\$ 301 related to the chartering of platforms due to the legal dispute related to the IRRF; (ii) US\$ 294 referring to IRPJ and CSLL for not adding the profits of subsidiaries and affiliates domiciled abroad to the IRPJ and CSLL calculation basis; (iii) US\$ 210 relating to the Unification of Fields (Cernambi, Lula, Tartaruga Verde and Tartaruga Mestiça); (iv) US\$ 78 deposit as guarantee for a ship seizure operation; and (v) US\$ 67 relating to the collection of income taxes (IRPJ and CSLL) due to the deduction of expenses for the contribution to the Petros Plan.

### 20.3. Contingent liabilities

Contingent liabilities for which either the Company is unable to make a reliable estimate of the expected financial effect that might result from resolution of the proceeding, or a cash outflow is not probable, are not recognized as liabilities in the financial statements but are disclosed in the notes to the financial statements, unless the likelihood of any outflow of resources embodying economic benefits is considered remote.

The estimates of contingent liabilities for legal proceedings are indexed to inflation and updated by applicable interest rates. As of December 31, 2020, estimated contingent liabilities for which the possibility of loss is not considered remote are set out in the following table:

Nature	12.31.2020	12.31.2019
Tax	24,511	32,376
Labor	8,179	9,734
Civil - General	4,621	5,977
Civil - Environmental	1,465	1,576
<b>Total</b>	<b>38,776</b>	<b>49,663</b>

The tables below detail the main causes of tax, civil, environmental and labor nature, whose expectations of losses are classified as possible.

## NOTES TO THE FINANCIAL STATEMENTS

### PETROBRAS

(Expressed in millions of US Dollars, unless otherwise indicated)

Description of tax matters	12.31.2020	Estimate 12.31.2019
<b>Plaintiff: Secretariat of the Federal Revenue of Brazil</b>		
1) Withholding income tax (IRRF), Contribution of Intervention in the Economic Domain (CIDE), Social Integration Program (PIS) and Contribution to Social Security Financing (COFINS) on remittances for payments of vessel charters.		
Current status: The claim about the incidence of withholding income tax (Imposto de Renda Retido na Fonte- IRRF) on remittances for payments of vessel charters, occurred from 1999 to 2002, involves the legality of the normative rule issued by the Federal Revenue of Brazil, which ensured no taxation over those remittances. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company, and will continue to defend its opinion. The other claims, concerning CIDE and PIS/COFINS, involve lawsuits in different administrative and judicial stages, for which the Company understands there is a possible likelihood of loss, since there are legal predictions in line with the position of the Company.		
	9,532	11,632
2) Income from foreign subsidiaries and associates located outside Brazil not included in the computation of taxable income (IRPJ and CSLL).		
Current status: This claim involves lawsuits in different administrative and judicial stages. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company.		
	4,106	5,224
3) Requests to compensate federal taxes disallowed by the Brazilian Federal Tax Authority.		
Current status: This claim involves lawsuits in different administrative and judicial stages. The company obtained a final decision at CARF, canceling part of the debts.		
	781	1,019
4) Incidence of social security contributions over contingent bonuses paid to employees.		
Current status: Awaiting defense judgment and appeals at the administrative and judicial levels.		
	812	992
5) Collection of Contribution of Intervention in the Economic Domain (CIDE) on transactions with fuel retailers and service stations protected by judicial injunctions determining that fuel sales were made without gross-up of such tax.		
Current status: This claim involves lawsuits in different judicial stages.		
	454	579
6) Deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of several expenses related to employee benefits.		
Current status: The claim involves lawsuits in different administrative and judicial stages.		
	468	536
<b>Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and Vitória</b>		
7) Alleged failure to withhold and pay tax on services provided offshore (ISSQN) in favor of some municipalities in the State of Espírito Santo, under the allegation that the service was performed in their "respective coastal waters".		
Current status: This claim involves lawsuits in different administrative and judicial stages.		
	1,056	1,250
<b>Plaintiff: States of SP, RJ, BA, PA, AL, MA, PB and SE Finance Departments</b>		
8) VAT (ICMS) and VAT credits on internal consumption of bunker fuel and marine diesel, destined to chartered vessels.		
Current status: This claim involves several tax notices from the states which are in different administrative and judicial stages. The reduction primarily relate to VAT tax amnesty programs in RJ.		
	384	1,191
<b>Plaintiff: States of RJ, AL and BA Finance Departments</b>		
9) VAT (ICMS) on dispatch of liquid natural gas (LNG) and C5+ (tax document not accepted by the tax authority), as well as challenges on the rights to this VAT tax credit.		
Current status: This claim involves lawsuits in different administrative and judicial stages.		
	788	1,098
<b>Plaintiff: States of RJ, AL, AM, PA, BA, GO, MA, SP and PE Finance Departments</b>		
10) Alleged failure to write-down VAT (ICMS) credits related to zero tax rated or non-taxable sales made by the Company and its customers.		
Current status: This claim involves lawsuits in different administrative and judicial stages.		
	818	1,058
<b>Plaintiff: States of RJ, BA, PE, SE and AM Finance Departments</b>		
11) The plaintiff alleges that the transfers between branches, especially in RJ, without segregating VAT (ICMS), under the special regime, reduced the total credits of the central department.		
Current status: This claim involves lawsuits in different administrative and judicial stages.		
	812	989
<b>Plaintiff: States of SP, SC and RS Finance Departments</b>		
12) Collection of VAT (ICMS) related to natural gas imports from Bolivia, alleging that these states were the final destination (consumers) of the imported gas, instead of MS state.		

**NOTES TO THE FINANCIAL STATEMENTS****PETROBRAS***(Expressed in millions of US Dollars, unless otherwise indicated)*

Current status: This claim involves lawsuits in different administrative and judicial stages, as well as three civil lawsuits in the Federal Supreme Court. In the judgment of a lawsuit filed by the State of MS against the States of SP, SC and RS in the STF, the State of MS was considered the legitimate creditor of the tax. After the Supreme Court decision, the expectation was changed to remote loss. This decision has not yet become final, and an appeal period is in progress for the States of SP, SC and RS.

- 640

**Plaintiff: States of RJ and PR Finance Departments**

13) Additional VAT (ICMS) due to differences in rates on jet fuel sales to airlines in the domestic market, among other questions relating to the use of tax benefits.

Current status: This claim involves lawsuits in different administrative and judicial stages. In 2020, the federal and state laws of RJ recognized the remission/amnesty on these debts. As a result, the loss expectation is deemed remote in RJ's lawsuits.

21 634

**Plaintiff: States of GO, RJ, PA, BA, SE, AL, SP and PR Finance Departments**

14) Appropriation of ICMS credit on the acquisition of goods (products in general) that, in the understanding of the inspection, would fit into the concept of material for use and consumption, being the tax credit undue.

Current status: This claim involves lawsuits in different administrative and judicial stages.

517 602

**Plaintiff: States of PR, AM, BA, PA, PE, SP and AL Finance Departments**

15) Incidence of VAT (ICMS) over alleged differences in the control of physical and fiscal inventories.

Current status: This claim involves lawsuits in different administrative and judicial stages.

392 571

**Plaintiff: State of SP Finance Department**

16) Deferral of payment of VAT (ICMS) taxes on B100 Biodiesel sales and the charge of a 7% VAT rate on B100 on Biodiesel interstate sales, including states in the Midwest, North and Northeast regions of Brazil and the State of Espírito Santo.

Current status: This claim involves lawsuits in different administrative and judicial stages.

416 565

**Plaintiff: States of RJ, SP, BA, PE, RS, PR and SE Finance Departments**

17) Misappropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to property, plant and equipment.

Current status: This claim involves lawsuits in different judicial stages. Exposure reduction due to the loss expectation revision on this matter.

331 562

**Plaintiff: States of RJ, SP, BA, AL, PB and AM Finance Departments**

18) Misappropriation of VAT tax credit (ICMS) on the acquisitions of drills and chemicals used in the formulation of drilling fluid, per the tax authorities.

Current status: This claim involves lawsuits in different administrative and judicial stages.

418 511

**Plaintiff: Secretariat of the Federal Revenue of Brazil**

19) Income taxes (IRPJ and CSLL) - Amortization of goodwill on the acquisition of equity interests.

Current status: This claim involves lawsuits in different administrative and judicial stages.

326 228

20) Other tax matters

2,079 2,495

**Total for tax matters****24,511 32,376****Description of labor matters**

	12.31.2020	Estimate 12.31.2019
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**Plaintiff: Employees and Sindipetro Union of ES, RJ, BA, MG, SP, PE, PB, RN, CE, PI, PR and SC.**

1) Actions requiring a review of the methodology by which the minimum compensation based on an employee's position and work schedule (Remuneração Mínima por Nível e Regime - RMNR) is calculated.

Current status: The Superior Labor Court (Tribunal Superior do Trabalho - TST) denied the special appeal filed by the Company. Petrobras filed a appeal, which is currently pending judgment by the Federal Supreme Court. On July 26, 2018, the president minister of the Federal Supreme Court (Supremo Tribunal Federal - STF) granted Petrobras' request to prevent the effects of the judgment of the TST, determining the suspension of individual and class actions on this subject, pending the deliberation on this matter in the Supreme Court or further deliberation of the rapporteur minister assigned to this case. On August 13, 2018, the selected Rapporteur confirmed the decision of the president minister and extended its effects to the ongoing actions on the matter, suspending all cases relating to this subject.

6,679 7,732

2) Other labor matters

1,500 2,002

**Total for labor matters****8,179 9,734**

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### PETROBRAS

(Expressed in millions of US Dollars, unless otherwise indicated)

Description of civil matters	Estimate	
	12.31.2020	12.31.2019
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP</b>		
1) Administrative and legal proceedings challenging an ANP order requiring Petrobras to pay additional special participation fees and royalties (production taxes) with respect to several fields. Current status: The claims involve lawsuits in different administrative and judicial stages.	927	892
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP and other agencies</b>		
2) Administrative and legal proceedings about fines imposed by ANP due to alleged failure to comply with the minimum exploration activities program, as well as alleged irregularities relating to compliance with oil and gas industry regulation. It also includes fines imposed by other agencies. Current status: The claims involve lawsuits in different administrative and judicial stages.	392	627
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP and other agencies</b>		
3) Proceedings challenging an ANP order requiring Petrobras to unite Tupi and Cernambi fields on the BM-S-11 joint venture; to unite Baúna and Piracicaba fields; to unite Tartaruga Verde and Mestiça fields; and to unite Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex, which would cause changes in the payment of special participation charges.  Current status: This list involves claims that are disputed in court and in arbitration proceedings, as follows: a) Tupi and Cernambi: initially, the Company made judicial deposits for the alleged differences resulting from the special participation. However, with the reversal of the favorable injunction, the payment of these alleged differences were made directly to ANP, and such judicial deposits were resumed in the 2nd Quarter of 2019. Arbitration remains suspended by court decision; b) Baúna and Piracicaba: the Court reassessed previous decision that disallowed judicial deposits, therefore the Company is currently depositing the controversial amounts. The arbitration is stayed. c) Tartaruga Verde and Mestiça: The Company has authorization to make the judicial deposits relating to these fields. The Regional Federal Court of the Second Region has the opinion that the Chamber of Arbitration has jurisdiction on this claim and the arbitration is ongoing.	471	391
<b>Plaintiff: EIG Management Company in USA</b>		
4) Lawsuit in the USA regarding Sete Brasil.  Current status: The lawsuit brought by EIG and its affiliates alleges that the Company has committed fraud by inducing the claimants to invest in "Sete" through communications that would have omitted an alleged corruption scheme involving Petrobras and "Sete". During the year 2020, the case continued at the stage of producing evidence in the lower court. The next procedural phases are expected to be scheduled, including the final merit hearing. Decrease in value mainly due to the closure in 2020 of several arbitrations in Brazil relating to the Sete Brasil matter.	53	1,024
<b>Plaintiff: Agência Estadual de Regulação de Serviços Públicos de Energia, Transportes e Comunicações da Bahia (AGERBA) and State Gas Companies</b>		
5) Public Civil Action (ACP) to discuss the alleged illegality of the gas supply made by the company to its Nitrogenated Fertilizer Production Unit (FAFEN / BA). Current status: The lawsuit is at the Bahia Court of Justice awaiting judgment of an appeal filed by the company.	308	299
6) Other civil matters	2,469	2,744
<b>Total for civil matters</b>	<b>4,620</b>	<b>5,977</b>

Description of environmental matters	Estimate	
	12.31.2020	12.31.2019
<b>Plaintiff: Ministério Público Federal, Ministério Público Estadual do Paraná, AMAR - Associação de Defesa do Meio Ambiente de Araucária, IAP - Instituto Ambiental do Paraná and IBAMA - Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis.</b>		
1) Legal proceeding related to specific performance obligations, indemnification and compensation for damages related to an environmental accident that occurred in the State of Paraná on July 16, 2000. Current status: The court partially ruled in favor of the plaintiff. However, both parties (the plaintiff and the Company) filed an appeal. The appeals were partially granted.	425	470
2) Other environmental matters	1,040	1,106
<b>Total for environmental matters</b>	<b>1,465</b>	<b>1,576</b>

## **20.4. Class action in Netherlands and Arbitrations in Brazil and in Argentina**

### **20.4.1. Class action in Netherlands**

On January 23, 2017, the Stichting Petrobras Compensation Foundation (“Foundation”) filed a class action before the district court in Rotterdam, in the Netherlands, against Petrobras parent company and Petrobras International Braspetro B.V. (PIBBV), Petrobras Global Finance B.V. (PGF), Petrobras Oil & Gas B.V. (PO&G) and some former managers of Petrobras.

The Foundation allegedly represents the interests of an unidentified group of investors and alleges that based on the facts uncovered by the Lava Jato investigation the defendants acted unlawfully towards investors. Based on the allegations, the Foundation seeks a number of declaratory relieves from the Dutch court.

The Company filed their first response to the claim on May 3, 2017 (first docket date), presenting the law firms that will defend these companies and requesting a hearing to discuss some aspects of the case.

On August 23, 2017, a hearing was held at the District Court in Rotterdam (“Court”) to establish the timeframe for proceedings. Petrobras (and other defendants) presented preliminary defenses on November 29, 2017 and the Foundation presented its response on March 28, 2018. On June 28, 2018, a hearing was held for the parties to present oral arguments. On September 19, 2018, the Court rendered its interim decision in the motion proceedings in which it accepted jurisdiction in most of 7 claims of the Foundation, without any assessment on the merits of the case.

On January 29, 2020, the Court determined that shareholders who understand Portuguese and / or who bought shares through intermediaries or other agents who understand that language, among other shareholders, are subject to the arbitration clause provided for in the Company's Bylaws, remaining out of the collective action proposed by the Foundation. The Court also considered the binding effect of the agreement signed to close the United States' Class action. In this way, the Foundation needs to demonstrate that it represents a sufficient number of investors to justify pursuing collective action in the Netherlands. The Foundation and the Company presented the oral arguments at a hearing held on January 26, 2021.

This collective action involves complex issues that are subject to substantial uncertainties and depend on a number of factors such as the standing of the Foundation as the alleged representative of the investors' interests, the applicable rules to this complaint, the information produced the evidentiary phase of the proceedings, analysis by experts, the timing of court decisions and rulings by the court on key issues, and the Foundation only seeks declaratory reliefs in this collective action. Currently, it is not possible to determine if the Company will be found responsible for the payment of compensation in subsequent individual complaints after this action as this assessment depends on the outcome of these complex issues. Moreover, it is uncertain which investors will be able to file subsequent individual complaints related to this matter against the Company.

In addition, the allegations asserted are broad, span a multi-year period and involve a wide range of activities, and, at the current stage, the impacts of such allegations are highly uncertain. The uncertainties inherent in all such matters affect the amount and timing of the ultimate resolution of these actions. As a result, the Company is unable to make a reliable estimate of eventual loss arising from this action. The company is victim of the corruption scheme uncovered by the Lava Jato investigation and aims to present and prove this before the Dutch Court.

The uncertainties inherent in all such matters do not enable the company to identify possible risks related to this action. Compensation for the alleged damages will only be determined by court rulings on complaints to be filed by individual investors. The Foundation is not able to demand compensation for damages.

The Company denies the allegations presented by the Foundation and intend to defend themselves vigorously.

### **20.4.2. Arbitrations in Brazil**

Petrobras is also currently a party to seven arbitrations proceedings before the Market Arbitration Chamber (*Câmara de Arbitragem do Mercado* - CAM), linked to the Brazilian Stock Exchange (B3), brought by investors who purchased Petrobras' shares traded on B3. Six of these arbitrations were initiated by national and foreign investors. The other proceeding was brought by an association that is not a shareholder of the Company and intends to be a collective arbitration, through representation of all minority shareholders of Petrobras that acquired shares on B3 between January 22, 2010 and July 28, 2015. Investors claim alleged financial losses caused by facts uncovered in the Lava Jato investigation.

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These claims involve complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the timing of the Chamber of Arbitration decisions, the information produced in discovery and analysis by retained experts.

Moreover, the claims asserted are broad and span a multi-year period. The uncertainties inherent in all such matters affect the amount and timing of their ultimate resolution. As a result, the Company is unable to make a reliable estimate of eventual loss arising from such arbitrations.

Depending on the outcome of these complaints, the Company may have to pay substantial amounts, which may have a significant effect on its consolidated financial position, financial performance and cash flows in a certain period. However, Petrobras does not recognize responsibility for the losses alleged by investors in these arbitrations.

Most of these arbitrations are still in the preliminary stages and a final decision is not expected in the near future. However, in relation to one of the arbitrations, proposed by two institutional investors, on May 26, 2020, a partial arbitral award was issued indicating the Company's responsibility, but not determining the payment of amounts by Petrobras, nor ending the procedure. This arbitration, as well as the other arbitrations in progress, are confidential and the partial arbitral award - which does not represent a CAM position, but only of the three arbitrators that make up this arbitration panel - does not extend to the other ongoing arbitrations.

On July 20, 2020, Petrobras filed a lawsuit for the annulment of this partial arbitral award, as the Company understands that the award contains serious flaws and improprieties. This lawsuit is still without any assessment on the merits of the case and its judgement is pending. On November 11, 2020, the 5th Business Court of Rio de Janeiro annulled the partial arbitration award, due to these serious flaws and improprieties pointed out by Petrobras. There is still appeal against this decision. In compliance with CAM rules, the lawsuit is confidential and only available to those involved in the original arbitration proceeding. Petrobras will continue to defend itself in this and other arbitrations.

### 20.4.3. Arbitrations in Argentina

On September 11, 2018, Petrobras was served of an arbitral claim filed by Consumidores Financieros Asociación Civil para su Defensa ("Association") against the company and other individuals and legal entities, before the "Tribunal de Arbitraje General de la Bolsa de Comercio de Buenos Aires". Among other issues, the Association alleges Petrobras' liability for a supposed loss of market value of Petrobras' shares in Argentina, due to proceedings related to Lava Jato investigation.

On June 14, 2019, the Company informed that the Chamber of Arbitration recognized the withdrawal of the arbitration due to the fact that the Association had not paid the arbitration fee within the established period. The Association appealed to the Argentine Judiciary against this decision, which was rejected on November 20, 2019. The Association filed a new appeal addressed to the Argentine Supreme Court, pending a final decision.

Petrobras denies the allegations presented by the Association and intends to defend itself vigorously.

### 20.5. Other legal proceeding in Argentina

Petrobras was included as a defendant in criminal actions in Argentina:

- Criminal action for alleged non-compliance with the obligation to publish "press release" in the Argentine market about the existence of a class action filed by Consumidores Financieros Asociación Civil para su Defensa before the Commercial Court, according to the provisions of the Argentine capital market law. Petrobras was never mentioned in the scope of the referred collective action. Petrobras presented procedural defenses in the criminal action but some of them have not yet been judged by the court. This criminal action is pending before the Criminal Economic Court No. 3 of the city of Buenos Aires;
- Criminal action related to an alleged fraudulent offer of securities, when Petrobras allegedly declared false data in its financial statements prior to 2015. Petrobras presented procedural defenses but some of them have not yet been judged by the court. On September 14, 2020, the judge accepted the defense presented by the Company and decided that Petrobras could not be sued in a criminal case before the Argentine Justice. The Association appealed this decision, and the appeal is pending judgment. This criminal action is pending before the Criminal Economic Court No. 2 of the city of Buenos Aires.

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### 20.6. Tax recoveries under dispute

#### 20.6.1. Deduction of VAT tax (ICMS) from the basis of calculation of PIS and COFINS

The Company filed complaints against Brazilian Federal Government challenging the constitutionality of the inclusion, from 2001 to 2020, of ICMS within the calculation basis of PIS and COFINS. In 2020, the Company obtained a favorable and definitive court decision on this claim, and the Company recognized the corresponding credit, as set out in note 17.

The tax credit relates to the exclusion of the ICMS effectively collected when included in the basis of calculation of PIS and COFINS, as deliberated by the Superior Federal Court (*Superior Tribunal Federal – STF*). In relation to the amounts corresponding to the difference between the criterion established in the regulation and the ICMS amount reported in the invoices, these were not recognized as tax credit, since it is still pending final decision of the STF.

#### 20.7. Accounting policy for provisions for legal proceedings, contingent liabilities and contingent assets

Provisions are recognized when: (i) the company has a present obligation as a result of a past event; (ii) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and (iii) the amount of the obligation can be reliably estimated.

Contingent liabilities are not recognized but are disclosed in explanatory notes when the likelihood of outflows is possible, including those whose amounts cannot be estimated.

The methodology used to estimate the provisions is described in note 4.5.

Contingent assets are not recognized, but are disclosed in explanatory notes when the inflow of economic benefits is considered probable. However, if the inflow of economic benefits is virtually certain, the related asset is not a contingent asset and it is recognized.

### 21. Provision for decommissioning costs

Non-current liabilities	2020	2019
Opening balance	17,460	15,133
Adjustment to provision	5,720	5,642
Transfers related to liabilities held for sale (*)	(519)	(3,071)
Payments made	(446)	(502)
Interest accrued	571	699
Others	15	3
Cumulative translation adjustment	(4,021)	(444)
<b>Closing balance</b>	<b>18,780</b>	<b>17,460</b>

(\*) In 2019, it includes transfers to held for sale related to the Campos basin; concessions in Rio Grande do Norte and Bahia states; Frade and Baúna fields, as set out in note 24.

The estimates for abandonment and dismantling of oil and natural gas producing properties are revised annually at December 31 along with the annual process of oil and gas reserves certification and whenever an indication of significant change in the assumptions used in the estimates occurs.

In 2020, the revision of the provision resulted in an increase of US\$ 5,720, reflecting the Strategic Plan 2021-2025 and the revision of technical assumptions. These are the main factors:

- increase attributable to the devaluation of the Real against the US Dollar (from R\$ 4.03 / US\$ 1.00 in 2019, to R\$ 5.20 / US\$ 1.00 in 2020) , with a direct impact on dollar costs;
- anticipation of timing the abandonments in some fields (mainly Tupi, Marlim Sul, Roncador and Jubarte);
- reduction in the risk-adjusted discount rate from 4.22% p.a. in 2019 to 4.15% p.a. in 2020, due to an improvement in risk perception in the world panorama;
- reduction due to the review of technical assumptions for wells and equipment.

### **21.1. Accounting policy for decommissioning costs**

The initial recognition of legal obligations to remove equipment and restore land or sea areas at the end of operations occurs after the technical and commercial feasibility of producing oil and gas in a field has been demonstrated. The calculations of the cost estimates for future environmental removals and recoveries are complex and involve significant judgments (as set out in note 4.6).

The estimates of decommissioning costs are reviewed annually based on current information on expected costs and recovery plans. When the revision of the estimates results in an increase in the provision for decommissioning costs, there is a corresponding increase in assets. Otherwise, in the event that a decrease in the liability exceeds the carrying amount of the asset, the excess shall be recognized immediately in profit or loss.

In the classification of non-current assets as held for sale, provisions for decommissioning costs related to these assets are also included. Any commitments assumed with future environmental removals and recoveries resulting from the sale of assets are recognized after the closing of the sale operation, in accordance with the contractual terms.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***22. Other Assets and Liabilities**

<b>Assets</b>		<b>12.31.2020</b>	<b>12.31.2019</b>
Escrow account and/ or collateral	(a)	780	670
Prepaid expenses	(b)	394	647
Advances to suppliers	(c)	263	1,130
Derivatives Transactions	(d)	119	85
Agreements and covenants	(e)	71	115
Others		238	349
		<b>1,865</b>	<b>2,996</b>
Current		1,230	1,493
Non-Current		635	1,503

<b>Liabilities</b>		<b>12.31.2020</b>	<b>12.31.2019</b>
Obligations arising from divestments	(f)	936	70
Contractual retentions	(g)	536	642
Advances from customers and partners	(h)	433	509
Provisions for environmental expenses, R&D and fines	(i)	460	610
Other recoverable taxes	(j)	406	534
Derivatives Transactions	(d)	283	157
Various creditors		123	155
Short-term benefits	(k)	147	38
Others		483	608
		<b>3,807</b>	<b>3,323</b>
Current		1,603	1,973
Non-Current		2,204	1,350

a) Amounts deposited for payment of obligations related to the finance agreement with China Development Bank, as well as margin in guarantee for futures and over-the-counter derivatives. In addition, there are amounts in investment funds from escrow accounts related to divestment of TAG and NTS.

b) Amounts whose compensation must be made by supplying materials or providing services contracted with these suppliers.

c) Spending on platform charters and equipment rentals to be appropriated in situations in which the start of operations has been postponed due to legal requirements or the need for technical adjustments.

d) Amounts anticipated by the joint operating partners.

e) Provisions for financial reimbursements assumed by Petrobras to be made to the acquirer, referring to abandonment costs of the divested assets of the following groups of fields: (i) Riacho da Forquilha; (ii) Pampo and Enchova; (iii) Macau; and (iv) Lagoa Parda. The settlement of these provisions follows decommissioning schedules, with payments beginning between two and three months after the date expected for the execution of operations, according to the contractual terms for reimbursement of abandonment of the respective groups of fields.

f) Retained amounts from obligations with suppliers to guarantee the execution of the contract, accounted for when the obligations with suppliers are due. Contractual retentions will be paid to suppliers at the end of the contract, upon issuance of the contract termination term.

g) Amounts related to the advanced or cash receipt from third parties, related to the sale of products or services in Brazil.

h) Accrued amounts for environmental compensation assumed by the Company in the course of its operations and research projects.

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- i) Non-current portion of other recoverable taxes (see note 17).
- k) Non-current portion of the voluntary severance programs (PDV), as set out in note 18.
- j) Fair value of open positions and transactions closed but not yet settled.

### 22.1. Accounting policy for obligations arising from divestments

Obligations arising from divestments are recognized at present value, using a risk-free discount rate, adjusted to the Company's credit risk, as the best estimate of disbursement required to settle the present obligation at the reporting date and may be subject to changes as activity execution schedules are updated and detailed by acquirers.

## 23. The “Lava Jato (Car Wash) Operation” and its effects on the Company

The Company has monitored the progress of investigations under the “Lava Jato” Operation and, in the preparation of these annual consolidated financial statements for the period ended December 31, 2020, did not identify any additional information that would affect the adopted calculation methodology to write off, in the third quarter of 2014, amounts overpaid for the acquisition of property, plant and equipment. The Company will continue to monitor these investigations for additional information in order to assess their potential impact on the adjustment made.

In addition, the Company has fully cooperated with the Brazilian Federal Police (*Polícia Federal*), the Brazilian Public Prosecutor's Office (*Ministério Público Federal*), the Federal Auditor's Office (*Tribunal de Contas da União – TCU*) and the General Federal Inspector's Office (*Controladoria Geral da União*) in the investigation of all crimes and irregularities.

During 2020, new leniency and plea agreements entitled the Company to receive funds with respect to compensation for damages, in the amount of US\$ 155 (US\$ 220 in 2019), accounted for as other income and expenses. Thus, the total amount recovered from Lava Jato investigation through December 31, 2020 was US\$ 1,287.

### 23.1. Investigations involving the Company

#### 23.1.1. U.S. Securities and Exchange Commission and Department of Justice inquiries

On September 27, 2018, the Company settled the open matters with the U.S. Department of Justice (DoJ) and the U.S. Securities and Exchange Commission (SEC) investigation, which encompassed the Company's internal controls, books and records, and financial statements from 2003 to 2012.

These agreements fully resolve the inquiries carried out by these authorities. Following this agreement, the Company paid US\$ 85 to the DoJ in 2018 and the same amount to the SEC in the first quarter of 2019. Additionally, the agreements also credit a remittance of US\$ 683 to the Brazilian authorities, which Petrobras deposited in January 2019 into a court deposit account. The Company fully recognized the effects of these settlements as other income and expenses in the third quarter of 2018.

This resolution met the best interest of the Company and its shareholders, and eliminated uncertainties, risks, burdens and costs of potential litigations in the United States.

#### 23.1.2. U.S. Commodity Futures Trading Commission - CFTC

In May 2019, the U.S. Commodity Futures Trading Commission (“CFTC”) contacted Petrobras with an inquiry regarding trading activities related to the Lava Jato Operation. Petrobras reiterates that it continues to cooperate with the regulatory authorities, including the CFTC, regarding any inquiry.

#### 23.1.3. Order of civil inquiry - Brazilian Public Prosecutor's Office

On December 15, 2015, the State of São Paulo Public Prosecutor's Office issued the Order of Civil Inquiry 01/2015, establishing a civil proceeding to investigate the existence of potential damages caused by Petrobras to investors in the Brazilian stock market. The Brazilian Attorney General's Office (*Procuradoria Geral da República*) assessed this civil proceeding and

determined that the São Paulo Public Prosecutor's Office has no authority over this matter, which must be presided over by the Brazilian Public Prosecutor's Office. The Company has provided all relevant information requested by the authorities.

## **24. Commitment to purchase natural gas**

The GSA agreement (Gas Supply Agreement) entered into with Petrobras and Yacimientos Petroliferos Fiscales Bolivianos - YPFB was initially effective until December 31, 2019. In addition, according to agreement provision, after December 31, 2019, the GSA was automatically extended until the entire volume contracted is delivered by YPFB and withdrawn by Petrobras. On March 6, 2020, by means of a contractual amendment, the Parties changed the daily contracted quantity (QDC) from 30.08 million m<sup>3</sup> per day to 20 million m<sup>3</sup> per day, which became effective as from March 11, 2020.

Thus, as of December 31, 2020, the total amount of the GSA for 2021 is nearly 7.30 billion cubic meters of natural gas (equivalent to 20.00 million cubic meters per day) and corresponds to a total estimated value of US\$ 1.06 billion. Based on the aforementioned extension clause, the Company expects purchases to continue through May 2024, on the same volume basis according to current indicators, representing an estimated additional amount of US\$ 3.35 billion, for the period from January 1, 2021 to May 05, 2024.

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## 25. Property, plant and equipment

### 25.1. By class of assets

	Land, buildings and improvement	Equipment and other assets (*)	Assets under construction (**)	Exploration and development costs (oil and gas producing properties) (***)	Right-of-use assets	Total
<b>Balance at January 1, 2019</b>	<b>5,210</b>	<b>76,028</b>	<b>28,926</b>	<b>47,219</b>	-	<b>157,383</b>
Adoption of IFRS 16	-	-	-	-	26,575	26,575
Additions	-	2,784	5,269	145	2,332	10,530
Additions to / review of estimates of decommissioning costs	-	-	-	5,497	-	5,497
Capitalized borrowing costs	-	-	1,336	-	-	1,336
Reimbursement under the Transfer of Rights Agreement	-	-	-	(8,319)	-	(8,319)
Write-offs	(3)	(92)	(293)	(407)	(21)	(816)
Transfers	478	6,055	(10,466)	4,879	126	1,072
Transfers to assets held for sale	(803)	(4,942)	(621)	(1,204)	(1,339)	(8,909)
Depreciation, amortization and depletion	(231)	(6,106)	-	(4,756)	(5,019)	(16,112)
Impairment recognition	(2)	(1,298)	(1,453)	(743)	(161)	(3,657)
Impairment reversal	-	236	80	459	-	775
Cumulative translation adjustment	(199)	(2,287)	(826)	(1,873)	(905)	(6,090)
<b>Balance at December 31, 2019</b>	<b>4,450</b>	<b>70,378</b>	<b>21,952</b>	<b>40,897</b>	<b>21,588</b>	<b>159,265</b>
Cost	6,856	119,993	21,952	70,647	26,440	245,888
Accumulated depreciation, amortization, depletion and impairment	(2,406)	(49,615)	-	(29,750)	(4,852)	(86,623)
<b>Balance at December 31, 2019</b>	<b>4,450</b>	<b>70,378</b>	<b>21,952</b>	<b>40,897</b>	<b>21,588</b>	<b>159,265</b>
Additions	-	4,587	3,090	365	4,338	12,380
Additions to / review of estimates of decommissioning costs (note 21)	-	-	-	5,421	-	5,421
Capitalized borrowing costs	-	-	941	-	-	941
Write-offs	(4)	(438)	(461)	(187)	(1,271)	(2,361)
Transfers	(258)	2,676	(3,175)	1,336	(21)	558
Transfers to assets held for sale	(8)	(226)	27	(848)	(13)	(1,068)
Depreciation, amortization and depletion	(142)	(4,298)	-	(3,864)	(4,022)	(12,326)
Impairment recognition (note 27)	(14)	(7,293)	(2,855)	(4,603)	(337)	(15,102)
Impairment reversal (note 27)	-	5,542	482	1,612	124	7,760
Cumulative translation adjustment	(981)	(12,248)	(4,558)	(8,963)	(4,517)	(31,267)
<b>Balance at December 31, 2020</b>	<b>3,043</b>	<b>58,680</b>	<b>15,443</b>	<b>31,166</b>	<b>15,869</b>	<b>124,201</b>
Cost	5,450	107,199	27,544	60,902	23,780	224,875
Accumulated depreciation, amortization, depletion and impairment (****)	(2,407)	(48,519)	(12,101)	(29,736)	(7,911)	(100,674)
<b>Balance at December 31, 2020</b>	<b>3,043</b>	<b>58,680</b>	<b>15,443</b>	<b>31,166</b>	<b>15,869</b>	<b>124,201</b>
Weighted average useful life in years	40 (25 to 50) (except land)	20 (3 to 31)		Units of production method	8 (2 to 47)	

(\*) It is composed of production platforms, refineries, thermoelectric power plants, natural gas processing plants, pipelines, and other operating, storage and production plants, including subsea equipment for the production and flow of oil and gas, depreciated based on the units of production method.

(\*\*) See note 33 for assets under construction by operating segment.

(\*\*\*) It is composed of exploration and production assets related to wells, abandonment and dismantling of areas, signature bonuses associated to proved reserves and other costs directly associated with the exploration and production of oil and gas.

(\*\*\*\*) In the case of assets under construction, it refers only to impairment losses.

For the the year ended December 31, 2020 additions to property, plant and equipment primarily relate to the development of oil and gas production in the pre-salt area, mainly the entry into operation of the FPSO P-77, a new production system located in the Atapu field.

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The right-of-use assets at December 31, 2020 comprise the following underlying assets:

	Platforms	Vessels	Properties	Total
<b>Balance at December 31, 2020</b>	<b>7,979</b>	<b>7,167</b>	<b>723</b>	<b>15,869</b>
Cost	11,144	11,257	1,379	23,780
Accumulated depreciation, amortization and depletion	(3,165)	(4,090)	(656)	(7,911)
<b>Balance at December 31, 2019</b>	<b>12,196</b>	<b>8,335</b>	<b>1,057</b>	<b>21,588</b>
Cost	14,542	10,698	1,364	26,604
Accumulated depreciation, amortization and depletion	(2,346)	(2,363)	(307)	(5,016)

### 25.2. Estimated useful life

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at December 31, 2020
5 years or less	3,456	(2,627)	829
6 - 10 years	8,255	(4,947)	3,308
11 - 15 years	5,266	(1,075)	4,191
16 - 20 years	35,395	(25,213)	10,182
21 - 25 years	28,875	(5,966)	22,909
25 - 30 years	11,464	(2,296)	9,168
30 years or more	4,500	(1,992)	2,508
Units of production method	15,305	(6,804)	8,501
<b>Total</b>	<b>112,516</b>	<b>(50,920)</b>	<b>61,596</b>
Buildings and improvements	5,317	(2,401)	2,916
Equipment and other assets	107,199	(48,519)	58,680

### 25.3. Accounting policy for Property, plant and equipment

Property, plant and equipment are measured at the cost to acquire or construct, including all costs necessary to bring the asset to working condition for its intended use and the estimated cost of dismantling and removing the asset and restoring the site, reduced by accumulated depreciation and impairment losses.

A condition for continuing to operate certain items of property, plant and equipment, such as industrial plants, offshore plants and vessels is the performance of regular major inspections and maintenance. Those expenditures are capitalized if a maintenance campaign is expected to occur, at least, 12 months later. Otherwise, they are expensed when incurred. The capitalized costs are depreciated over the period through the next major maintenance date.

Spare parts are capitalized when they are expected to be used during more than one period and can only be used in connection with an item of property, plant and equipment. These are depreciated over the useful life of the item of property, plant and equipment to which they relate.

Borrowing costs directly attributable to the acquisition or construction of qualifying assets are capitalized as part of the costs of these assets. General borrowing costs are capitalized based on the Company's weighted average cost of borrowings outstanding applied over the balance of assets under construction. Loans, directly attributable to the construction of qualifying assets are excluded from this calculation until the completion of all activities necessary to set the asset in conditions for use or sale intended by management. In general, the Company suspends capitalization of borrowing to the extent investments in a qualifying asset hibernates during a period greater than one year or whenever the asset is prepared for its intended use.

Assets directly associated to oil and gas production of a contract area without useful life lower than the estimated length of reserves depletion, such as signature bonuses, are depreciated or amortized based on the unit-of-production method.

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The unit-of-production method of depreciation (amortization) is computed based on a unit of production basis (monthly production) over the proved developed oil and gas reserves, except for signature bonuses for which unit of production method takes into account the monthly production over the total proved oil and gas reserves on a field-by-field basis.

Assets related to oil and gas production with useful lives shorter than the life of the field; floating platforms and other assets unrelated to oil and gas production are depreciated on a straight-line basis over their useful lives, which are reviewed annually. Note 25.2 provides further information on the estimated useful life by class of assets. Lands are not depreciated.

Right-of-use assets are presented as property, plant and equipment and, according to the useful lives of their respective underlying assets and the characteristics of lease agreements (term, asset transfer or exercise of call option), are depreciated using the straight-line method based on contractual terms.

### **25.4. Concession for exploration of oil and natural gas – Transfer of Rights Agreement (“Cessão Onerosa”)**

On November 1, 2019, Petrobras signed with the Brazilian Federal Government the Amendment to the Transfer of Rights Agreement, which provides for the reimbursement to the Company of US\$ 9,058, as established in the Resolution 5/2019 enacted in April 2019 by the National Energy Policy Council (Conselho Nacional de Política Energética – CNPE).

At this signing, the Company recognized accounts receivable offsetting property, plant and equipment, in the amount of US\$ 8,319 (considering the average exchange rate prevailing in the fourth quarter of 2019). On December 11, 2019, the Brazilian Federal Government paid this amount to the Company, bearing interest at SELIC rate from the date of the signing, in the amount of US\$ 43, accounted for as finance income in 2019.

### **25.5. Oil and Gas fields operated by Petrobras returned to ANP**

In 2020, the following oil and gas fields were returned to ANP: Agulha, Caioba, Camorim, Dourado, Guaricema, Piranema, Piranema Sul, Salgo e Tatuí. These fields were returned to ANP mainly due to their economic unfeasibility and, as a consequence, the Company wrote off the amount of US\$ 12 in addition to impairments recognized in prior years.

In 2019, the following oil and gas fields were returned to ANP: Juruá, Iraúna, Barra do Ipiranga, Lagoa Branca, Nativo Oeste, Jacupemba, Mariricu Oeste, Rio Barra Seca, Rio Itaúnas Leste, Rio São Mateus Oeste and Sul de Sapinhoá. These fields were returned to ANP mainly due to their economic unfeasibility and, as a consequence, the Company wrote off the amount of US\$ 74 in addition to impairments recognized in prior years.

In 2018, the following oil and gas fields were returned to ANP: Japiim, Camarão Norte, part of Espadarte and part of Sibite. These fields were returned to ANP mainly due to their economic unfeasibility and, as a consequence, the Company wrote off the amount of US\$ 0.1 in addition to impairments recognized in prior years.

### **25.6. Capitalization rate used to determine the amount of borrowing costs eligible for capitalization**

The capitalization rate used to determine the amount of borrowing costs eligible for capitalization was the weighted average of the borrowing costs applicable to the borrowings that were outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. For the year ended December 31, 2020, the capitalization rate was 6.12% p.a. (6.40% p.a. for the year ended December 31, 2019).

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*(Expressed in millions of US Dollars, unless otherwise indicated)***26. Intangible assets****26.1. By class of assets**

	Rights and Concessions	Software	Goodwill	Total
<b>Balance at January 1, 2019</b>	<b>2,330</b>	<b>272</b>	<b>203</b>	<b>2,805</b>
Addition	1,339	74	-	1,413
Concession for exploration of oil and natural gas - Oil Surplus on the Transfer of Rights Agreement	15,341	-	-	15,341
Capitalized borrowing costs	-	4	-	4
Write-offs	(11)	(6)	-	(17)
Transfers	(83)	(47)	(137)	(267)
Amortization	(10)	(60)	-	(70)
Impairment recognition	(1)	-	-	(1)
Cumulative translation adjustment	263	5	(3)	265
<b>Balance at December 31, 2019</b>	<b>19,168</b>	<b>242</b>	<b>63</b>	<b>19,473</b>
Cost	19,290	1,469	63	20,822
Accumulated amortization	(122)	(1,227)	-	(1,349)
<b>Balance at December 31, 2019</b>	<b>19,168</b>	<b>242</b>	<b>63</b>	<b>19,473</b>
Addition	31	88	-	119
Capitalized borrowing costs	-	1	-	1
Write-offs	(173)	(3)	-	(176)
Transfers	(2)	(1)	(26)	(29)
Amortization	(8)	(58)	-	(66)
Impairment recognition	-	(6)	(6)	(12)
Cumulative translation adjustment	(4,302)	(53)	(7)	(4,362)
<b>Balance at December 31, 2020</b>	<b>14,714</b>	<b>210</b>	<b>24</b>	<b>14,948</b>
Cost	14,803	1,245	24	16,072
Accumulated amortization	(89)	(1,035)	-	(1,124)
<b>Balance at December 31, 2020</b>	<b>14,714</b>	<b>210</b>	<b>24</b>	<b>14,948</b>
Estimated useful life in years	(*)	5	Indefinite	

(\*) Mainly composed of assets with indefinite useful lives, which are reviewed annually to determine whether events and circumstances continue to support an indefinite useful

At December 31, 2020 and 2019, no impairment was identified on goodwill.

**Result of the 16th ANP Bidding Round**

On October 10, 2019, Petrobras acquired one offshore block in the 16th Bidding Round under the Concession Regime, held by the ANP. The total amount of the signature bonus paid was US\$ 348.

There were no new bidding rounds in the concession regime during 2020.

**Exploration Rights - Surplus Volume of the Transfer of Rights Agreement and Production Sharing contract**

On November 6, 2019, the ANP held the Bidding Round for the Surplus Volume of the Transfer of Rights Agreement, when the Company acquired 90% interest in the exploration and production rights of the surplus volume of Búzios field from the Assignment Agreement, in partnership with CNODC Brasil Petróleo e Gás Ltda. (5%) and CNOOC Petroleum Brasil Ltda. (5%) and 100% interest of the surplus volume of the Itapu field.

The signature bonus corresponding to the Company's interest was US\$ 14,912, paid in December 2019.

The co-participation agreement is being negotiated and should be concluded by September 2021, final basis to the rights and obligations arising from the production sharing contract in Búzios and Itapu. Since it was a special bidding round, related to the production surplus from fields with technical and commercial feasibility already defined, the values of the signature bonuses paid will be transferred from intangible assets to property, plant and equipment after the finalization of the co-participation agreement and eventual adjustments to the reserves volumes that will be incorporated by Petrobras.

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On November 7, 2019, the ANP held the 6<sup>th</sup> Bidding Round under the production sharing regime. Petrobras acquired, in partnership with CNODC Brasil Petróleo e Gás Ltda. (20%), the Aram block, located in the Santos Basin. Petrobras will be the operator of the field with an 80% interest. The signature bonus corresponding to the Company's interest was US\$ 982, paid in December 2019.

There were no new bidding rounds in the production sharing regime during 2020.

### Assumption of additional participation in concession contracts

During 2020, partner companies in some exploratory projects decided to leave the business and the company assumed their participation in the consortia. Assumption of rights was non-onerous, and did not imply disbursement by the company. Until December 31, 2020, the ANP had approved the signing of the additives to the concession contracts for the exploration blocks ES-M-596 (originally 50% Petrobras and 50% Equinor), ES-M-671 (40% Petrobras; 35% Equinor and 25% Total) and ES-M-743 (40% Petrobras; 35% Equinor and 25% Total), in which the company now holds 100% interest.

The transaction is similar to a donation, thus the installments related to the exploration rights assumed were assessed at fair value, taking as a parameter the total value of the bonus offered to these blocks in the 11th bidding round. The value of the signature bonus corresponds to the shares assumed and was recognized in intangible assets in the amount of US\$ 25, and the corresponding income as other operating income. The company received the installments due by the partners in the minimum exploratory program (*Programa Exploratório Mínimo - PEM*).

### 26.2. Accounting policy for intangible assets

Intangible assets are measured at the acquisition cost, less accumulated amortization and impairment losses and comprise rights and concessions, including the signature bonus paid for concessions and production sharing agreements for exploration and production of oil and natural gas (capitalized acquisition costs), public service concessions, trademarks, patents, software and goodwill.

Internally-generated intangible assets are not capitalized and are expensed as incurred, except for development costs that meet the recognition criteria related to the completion and use of assets, probable future economic benefits, and others.

When the technical and commercial feasibility of oil and gas production is demonstrated for the first field in an area, the value of the signature bonus corresponds to the right to explore, drill and produce oil and gas fields is reclassified to property, plant and equipment at their full value. While they are in intangible assets, they are not amortized. Other intangible assets with defined useful lives are amortized on a straight-line basis over their estimated useful lives.

If, when defining the first field of a block, there are exploratory activities being carried out in different locations in the block, so that oil and gas volumes can be estimated for other possible reservoirs in the area, then the value of the signature bonus is partially reclassified to PP&E, based on the ratio between the volume of oil and gas expected (oil in place - VOIP) of a specific reservoir and the total volume of oil and gas expected for all possible reservoirs in the area.

However, if exploratory activities in the remaining areas do not result in technical and commercial viability, the corresponding value of the signature bonus is not written off, but transferred to PP&E and added to the value of the signature bonus related to the location that was previously assessed as technically and commercially viable.

Intangible assets with an indefinite useful life are not amortized but are tested annually for impairment. Their useful lives are reviewed annually.

### 26.3. Exploration rights returned to the Brazilian Agency of Petroleum, Natural Gas and Biofuels - Agência Nacional de Petróleo, Gás Natural e Biocombustíveis (ANP)

In 2020, 45 exploration areas were returned to the ANP, in Camamu-Almada, Espírito Santo, Jequitinhonha, Potiguar, Recôncavo, Pelotas, Pernambuco-Paraíba, Santos and Sergipe-Alagoas basins (12 in 2019 in Sergipe-Alagoas, Potiguar, Recôncavo and Parnaíba basins), totaling US\$ 172 (US\$ 3 in 2019), mainly due to the Peroba exploratory block US\$ 154.

## 27. Impairment

The Company annually tests its assets for impairment or when there is an indication that their carrying amount may not be recoverable.

During 2020, impairment losses were mainly recognized in the first quarter, arising from significant and adverse effects on the oil and oil products market: (i) the outbreak of the COVID-19 pandemic, with a sharp reduction in the circulation of people and in the world economic activity, causing a shock on demand of these products, and (ii) failure in negotiations between members of Organization of the Petroleum Exporting Countries (OPEC) and its allies, led by Russia, to define production levels, which contributed to an increase in the global oil supply with a reduction in price in early March.

These events led the Company to adopt a set of measures, in the first quarter of 2020, aiming at preserving cash generation, as well as to revise the key assumptions of the 2020-2024 Strategic Plan, such as Brent prices, exchange rates, oil product spreads, among others, whose effects were accounted for in the first quarter of 2020.

On November 25, 2020, management concluded and approved its 2021-2025 Strategic Plan, considering a complete update of economic assumptions, as well as its project portfolio and estimates of reserve volumes, which support the impairment tests conducted in this reporting period.

The oil and gas production estimated in the scope of the plan indicates a continuous growth focused on the development of projects that generate higher value, with an increase in the participation of assets in the pre-salt layer, which present lower lifting costs. During this period, 13 new production systems are expected to enter into operation, all of which will be allocated to deep and ultra-deep water projects.

The expected investment considered in the plan for the five-year period is US\$ 55 billion, 84% allocated to E&P segment (of which US\$ 32 billion destined for pre-salt layer assets).

The table below shows impairment losses and reversals recognized within the statement of income in 2020, 2019 and 2018:

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Asset or CGU by nature (*)	Carrying amount	Recoverable amount (**)	Impairment (losses) / reversals	Business segment	Comments
<b>2020</b>					
<b>Property, plant and equipment and intangible assets</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	42,421	40,511	(7,316)	E&P - Brazil	item (a1)
Oil and gas production and drilling equipment in Brazil	120	-	(119)	E&P - Brazil	item (b1)
Comperj	266	526	260	RTM - Brazil	item (c1)
Second refining unit in RNEST	410	388	(22)	RTM - Brazil	item (d1)
Corporate facilities	152	-	(161)	Corporate, others	item (e)
Others			3	Several	
			<b>(7,355)</b>		
<b>Assets classified as held for sale</b>					
Producing properties relating to oil and gas activities	-	270	79	E&P - Brazil	note 27.2
Cartola and Ataulfo Alves vessels	80	19	(62)	RTM - Brazil	note 27.2
<b>Total</b>			<b>(7,338)</b>		
<b>2019</b>					
<b>Property, plant and equipment and intangible assets</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	105,532	196,994	(1,859)	E&P - Brazil	item (a2)
Transpetro's fleet of vessels	1,347	1,453	103	RTM - Brazil	item (f1)
Oil and gas production and drilling equipment in Brazil	314	-	(307)	E&P - Brazil	item (b2)
Fertilizer plant - UFN III	204	-	(200)	RTM - Brazil	item (g1)
Comperj	330	117	(209)	RTM - Brazil	item (c2)
Second refining unit of RNEST	1,043	498	(534)	RTM - Brazil	item (d2)
Oil and gas production and drilling equipment abroad	343	15	(333)	E&P - Abroad	item (h)
Others	33	-	(67)	Several	
			<b>(3,406)</b>		
<b>Assets classified as held for sale</b>					
Producing properties Pampo and Enchova fields	328	808	494	E&P - Brazil	note 27.2
Producing properties Pampo and Frade field	19	105	84	E&P - Brazil	note 27.2
Producing properties Pampo and Maromba field	-	68	67	E&P - Brazil	note 27.2
PO&G BV	444	354	(89)	E&P - Abroad	
Others	592	468	2	Several	
<b>Total</b>			<b>(2,848)</b>		
<b>2018</b>					
<b>Property, plant and equipment and intangible assets</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	7,019	9,923	(524)	E&P - Brazil	item (a3)
Transpetro's fleet of vessels	1,721	1,300	(428)	RTM - Brazil	item (f2)
Oil and gas production and drilling equipment in Brazil	199	6	(197)	E&P - Brazil	item (b3)
Fertilizer plant - UFN III	312	200	(114)	RTM - Brazil	item (g2)
Producing properties relating to oil and gas activities Abroad (several CGUs)	2,258	1,554	(715)	E&P - Brazil	item (i)
GASFOR II	58	-	(59)	Gas & Power - Brazil	item (j)
Comperj	46	-	(47)	RTM - Brazil	item (c3)
Second refining unit of RNEST	1,114	1,092	(22)	RTM - Brazil	item (d3)
Others	666	756	(14)	Several Segments	
			<b>(2,120)</b>		
<b>Assets classified as held for sale</b>					
Producing properties relating to oil and gas activities in Riacho da Forquilha	98	459	34	E&P - Brazil	note 27.2
Others	25	109	81	Several Segments	
<b>Total</b>			<b>(2,005)</b>		

(\*) It only includes carrying amounts and recoverable amounts of impaired assets or assets for which reversals were recognized.

(\*\*) The recoverable amounts of assets for impairment computation were their value in use, except for oil and gas production and drilling equipment that were based on their fair value.

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### 27.1. Impairment of property, plant and equipment and intangible assets

For impairment testing purposes, the Company bases its cash flow projections on:

- The estimated useful life of the asset or assets grouped into the CGU, based on the expected use of those assets, considering the Company's maintenance policy;
- Assumptions and financial budgets/forecasts approved by management for the period corresponding to the expected life cycle of each different business; and
- Pre-tax discount rates derived from the Company's post-tax weighted average cost of capital (WACC), adjusted by specific risk-premiums in case of projects postponed for an extended period, or specific country-risks, in case of assets abroad. The use of post-tax discount rates in determining value in use does not result in materially different recoverable amounts if pre-tax discount rates had been used.

Post-tax discount rates, excluding inflation, applied in the tests were:

Activity	12.31.2020	12.31. 2019
Producing properties relating to oil and gas activities in Brazil	7.1% p.a.	6.8% p.a.
RTM in Brazil	6.1% p.a.	6.4% p.a.
RTM in Brazil – postponed projects	7.4% p.a.	7.8% p.a.
Gas logistics	6.4% p.a.	6.3% p.a.
Transport in Brazil	5.4% p.a.	from 4.3% to 5.8% p.a.

#### 27.1.1. Planning assumptions used in impairment testing

The cash flow projections used to measure the value in use of the CGUs at December 31, 2020, were mainly based on the following updated assumptions for average Brent prices and Brazilian real/U.S. dollar average exchange rates:

2021-2025 Strategic Plan (*)	2021	2022	2023	2024	2025	Long term Average
Average Brent (US\$/barrel)	45	45	50	50	50	50
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	5.50	4.69	4.46	4.28	4.07	3.76

(\*) In the impairment testing in the first quarter, average Brent prices ranged from US\$ 25/barrel to US\$ 50/barrel, and average exchange rate from R\$ 5.09 to R\$ 3.78.

At December 31, 2019, average Brent prices and Brazilian real/U.S. dollar average exchange rates used were:

	2020	2021	2022	2023	2024	Long term Average
Average Brent (US\$/barrel)	65	65	65	65	65	65
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	3.85	3.79	3.75	3.72	3.7	3.6

#### 27.1.2. Revision of Cash Generating Units

During 2020, management identified and assessed the following changes in CGUs:

##### E&P Segment

- CGU North group – exclusion of platforms PCH-1, PCH-2 and PNA-2, and fields of Anequim, Bagre, Cherne, Congro, Garoupa, Malhado, Namorado, Parati and Viola, who had their activities hibernated, with no expected resumption. Currently, this CGU is formed by Marlim, Albacora and Voador fields and remaining platforms;
- CGU Fazenda Alegre group - exclusion of fields of Campo Grande, Córrego Cedro Norte, Córrego Cedro Norte Sul, Córrego Dourado, Fazenda São Jorge, Inhambu, Jacutinga, Lagoa Bonita, Seriema e Tabuiaia, due to the divestments occurred. Currently, this CGU is formed by Cancã and Fazenda Alegre fields.

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- iii. CGU CVIT group: extinction of the group of fields, which was formed by Golfinho and Canapu fields, since the Company decided to end Canapu field operations. The two fields are now tested separately.

### **Gas & Power Segment**

- i. CGU Natural gas – exclusion of the Atalaia Natural Gas Processing Unit (UPGN), due to the decision to cease its operation in the 2021-2025 Strategic Plan. The unit is now tested separately.
- ii. CGUs FAFEN BA and SE - extinction of these CGUs, since the Company signed a lease agreement relating to these fertilizer plants with Proquigel Química, classifying it as a financial lease, with the recognition of a receivable and the write-off of remaining carrying amounts classified as PP&E.

### **RT&M Segment**

- i. Transportation CGU - vessels Cartola and Afaulfo Alves were excluded from this CGU, since the Company decided to cease their operations, and were reclassified to assets held for sale, tested for impairment separately.

Information on key assumptions for impairment testing and on CGU definitions is presented in notes 4.2 and 4.3, respectively.

### **27.1.3. Information on the main impairment losses**

Information on the main impairment losses and reversals of property, plant and equipment and intangible assets are described below:

#### **a1) Producing properties in Brazil – 2020**

Impairment losses on producing properties in Brazil amount to US\$ 7,316, most of it related to CGUs that provide service in E&P fields, also reflecting the hibernation of producing assets on the first quarter of 2020, as well as the revision on the key assumptions of the Strategic Plan, mainly expected Brent prices, depreciation of Brazilian real against U.S. dollar, economic slowdown and reduction on demand for oil and oil products.

The following table presents significant impairment for 2020:

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<b>CGU</b>	<b>Basin</b>	<b>Area</b>	<b>Impairment</b>	<b>Carrying amount after impairment</b>
North	Campos basin	Post-Salt	(1,335)	4,765
Roncador	Campos basin	Post-Salt	(1,265)	7,271
Carmópolis	Sergipe basin	Onshore and shallow-water	(594)	127
Albacora Leste	Campos basin	Post-Salt	(470)	1,379
Berbigão-Sururu	Santos basin	Pre-Salt	(467)	2,754
Namorado	Campos basin	Post-Salt	(304)	–
Marlim Sul	Campos basin	Post-Salt	(299)	5,913
Golfinho	Santos basin	Pre-Salt	(253)	182
Viola	Santos basin	Post-Salt	(180)	–
Papa-Terra	Campos basin	Post-Salt	(164)	1
Cherne	Campos basin	Post-Salt	(157)	–
Garoupa	Santos basin	Post-Salt	(148)	–
Canto do Amaro	Potiguar basin	Onshore and shallow-water	(138)	210
Malhado	Campos basin	Post-Salt	(133)	–
Congro	Campos basin	Post-Salt	(131)	–
Uruguá	Santos basin	Post-Salt	(114)	129
Siririzinho	Sergipe-Alagoas basin	Onshore and shallow-water	(86)	60
Others (*)	Several	Several	(1,078)	13,046
<b>Total</b>			<b>(7,316)</b>	<b>35,837</b>

(\*) It comprises 92 CGUs.

**a2) Producing properties in Brazil – 2019**

Impairment assessment for producing properties in Brazil resulted in US\$ 1,859 impairment losses, mainly comprising:

- Impairment losses in the amount of US\$ 2,092, mainly related to the CGUs of Papa-Terra (US\$ 369), Uruguá group (US\$ 344), CVIT group (US\$ 206), Corvina (US\$ 158), Piranema (US\$ 128), Camorim (US\$ 109), Pirambu (US\$ 102), Merluza group (US\$ 98), Miranga group (US\$ 76), Guaricema (US\$ 76) and Água Grande group (US\$ 72), mainly due to the decrease in estimates for the average Brent price on the projection horizon, to higher estimates for future decommissioning costs, due to the reduction in risk-free discount rates, and to changes in the schedule for removal and treatment of oil and gas production facilities;
- Impairment reversals totaling US\$ 53 primarily relating to Peroá group (US\$ 30) and Castanhal (US\$ 12), mainly due to gains in the production curve and accelerated depreciation tax benefit related the new tax model for oil and gas activities.

**a3) Producing properties in Brazil – 2018**

Impairment assessment for producing properties in Brazil under the concession regime for oil and gas resulted in a net reversal of impairment losses of US\$ 103 (post-tax discount rates of 7.4% p.a.). This amount comprises:

- Impairment losses totaling US\$ 1,054 primarily related to CGUs Camorim (US\$ 140), Linguado (US\$ 139), Piranema (US\$ 93), Guaricema (US\$ 92), Juruá (US\$ 91), Bicudo (US\$ 83), Caioba (US\$ 61), Pper-1 group (US\$ 49), Garoupinha (US\$ 39), Frade (US\$ 39), Castanhal (US\$ 36) and Papa Terra (US\$ 35). These losses were substantially due to higher estimates of future decommissioning costs driven by costs related to subsea facilities and equipment and depreciation of the Brazilian real against the U.S. dollar.
- Reversals of impairment totaling US\$ 530 primarily from the CGUs Cvit group (US\$ 158), Uruguá group (US\$ 151), Ceará Mar group (US\$ 50), Dom João (US\$ 23), Miranga group (US\$ 16), Fazenda Belém group (US\$ 13) and Bijupirá-Salema group (US\$ 13), due to upward revision in the estimated production curves following a review of certain projects investments, as set out in the BMP 2019-2023.

**b1) Oil and gas production and drilling equipment in Brazil - 2020**

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Impairment losses of US\$ 120 relates to equipment and structures in the E&P segment, mainly due to the decision to cease with the Estaleiro Inhaúma project, leading to the recognition of losses in the amount of US\$ 69.

### **b2) Oil and gas production and drilling equipment in Brazil - 2019**

In 2019, the Company decided to discontinue the use of P-37 platform in Marlim field, resulting in its exclusion of North group and its independent assessment for impairment, resulting in losses in the amount of US\$ 307.

### **b3) Oil and gas production and drilling equipment in Brazil - 2018**

In 2018, impairment losses for oil and gas production and drilling equipment in Brazil amounted to US\$ 197, as a result of: i) ceased operation of the single buoy mooring Monobóia 2 – PDET (US\$ 172); ii) lower fair value of certain equipment related to the FPSO P-72 and P- 73 that could not be committed to other projects, when compared to their carrying amount (US\$ 24).

### **c1) Comperj – 2020**

Impairment reversals amounted to US\$ 260, mainly due to the reduction in the estimated investments for the completion of the project relating to the first refining unit facilities, resulting from the depreciation of the Brazilian Real in relation to the U.S. Dollar, as well as to optimization measures adopted.

### **c2) Comperj – 2019**

Impairment losses amounted to US\$ 209, arising from the investments made due to the Conduct Adjustment Declaration (“TAC”) to close the public civil action requesting the environmental licensing, as well as to the investments made in the first refining unit facilities, which are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin.

### **c3) Comperj – 2018**

At December 31, 2018, the resumption of the Comperj project still depended on new partnerships. However, the construction of the first refining unit facilities that would also support the natural gas processing plant (UPGN) was in progress as the facilities were part of the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin. Nevertheless, due to the interdependence between such infrastructure and the first refining unit, the Company recognized additional impairment charges, totaling US\$ 47 in 2018.

### **d1) Second refining unit of RNEST – 2020**

The cash flows to measure the value in use of the second refining unit of RNEST take into account the postponing of the beginning of the operation, triggering impairment losses in the amount of US\$ 22.

### **d2) Second refining unit of RNEST – 2019**

The cash flows to measure the value in use of the second refining unit of RNEST took into account the postponing of the beginning of the operation, triggering impairment losses in the amount of US\$ 534.

### **d3) Second refining unit of RNEST – 2018**

The impairment assessment over the second refining unit of RNEST resulted in the recognition of an impairment loss amounting to US\$ 22, as the beginning of operation had been postponed (real discount rate applied was 7.3% p.a. post-tax discount rate for the refining business).

### **e) Corporate facilities – 2020**

The Company decided to hibernate a corporate building, in the state of Bahia, due to its permanent vacancy, resulting in a US\$ 161 impairment loss on the right of use asset.

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### **f1) Transpetro's fleet of vessels - 2019**

The depreciation of Reais against U.S. Dollars used in the projections of the Strategic Plan 2020-2024, compared to the assumptions used in the previous plan, had a positive effect on the cash generation projected in Reais for the CGU, given that freight rates (cash inflows) are quoted in U.S. dollars. Thus, a US\$ 103 reversal of impairment was accounted for in 2019.

### **f2) Transpetro's fleet of vessels - 2018**

The lower freight rates projected in PNG 2019-2023 significantly affected impairment assessment of the Transpetro's fleet of vessels, resulting in the recognition of impairment losses in the amount of US\$ 428 in 2018 (post-tax discount rates applied to the transportation sector ranged from 3.8% p.a. to 6.6% p.a.).

### **g1) Fertilizer plant - UFN III – 2019**

Following the Company's decision to quit the conclusion of this plant located in the state of Mato Grosso do Sul, this asset was written-off, in the amount of US\$ 200.

### **g2) Fertilizer plant - UFN III – 2018**

An impairment loss of US\$ 114 was recognized for the fertilizer plant UFN III due to its lower fair value.

### **h) Oil and gas production and drilling equipment abroad – 2019**

In January 2020, the sale of drillship Sonda Vitória 10,000 (NS-30), owned by Drill Ship International B.V. - DSI, a subsidiary of PIB BV, was closed. Thus, impairment losses in the amount of US\$ 333 were recognized, due to the difference between the expected sale value and its carrying amount.

### **i) Producing properties relating to oil and gas activities abroad - 2018**

The Company recognized an impairment loss in the amount of US\$ 715 with respect to producing properties of oil and gas activities in the Gulf of Mexico, primarily driven by changes in operational assumptions and discount rate considering the terms of the agreement between the Company and Murphy Oil Corporation in order to establish a joint venture through such assets.

### **j) GASFOR II – 2018**

In 2018, management decided to halt the development of the GASFOR II project, carried out by TAG. Accordingly, this asset was excluded from the Natural Gas CGU and its impairment test was performed separately. Due to its halt, it is not possible to estimate future cash flows arising from the use of this asset, resulting in the recognition of impairment losses in the amount equal to the carrying amount thereof (US 59).

## **27.1.4. Assets most sensitive to future impairment**

Whenever the recoverable amount of an asset or CGU falls below the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The following table presents the assets and CGUs most sensitive to future impairment losses, presenting recoverable amounts close to their current carrying amounts. The analysis presented below considers the estimated impairment losses or reversals if there was a 10% reduction or increase in the recoverable amount of the CGUs, arising from changes in material assumptions:

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Potential impairment losses - 10% reduction in the recoverable amount	Business segment	Carrying amount	Recoverable amount	Sensitivity
Assets with recoverable amounts close to their carrying amounts				
Producing properties relating to oil and gas activities in Brazil (5 CGUs)	E&P	597	578	(19)
Assets with impairment losses				
Producing properties relating to oil and gas activities in Brazil (39 CGUs)	E&P	26,228	23,605	(2,623)
Refining plants (3 CGUs)	RT&M	944	850	(94)
		<b>27,769</b>	<b>25,033</b>	<b>(2,736)</b>

Potential impairment reversals - 10% increase in the recoverable amount	Business segment	Carrying amount	Recoverable amount	Sensitivity (*)
Assets with impairment losses				
Producing properties relating to oil and gas activities in Brazil (39 CGUs)	E&P	26,228	28,851	1,825
Refining plants (3 CGUs)	RT&M	944	1,038	94
		<b>27,172</b>	<b>29,889</b>	<b>1,919</b>

(\*) When calculating a 10% increase in the recoverable amount, the amount of impairment to be reversed is limited to the accumulated impairment of the CGU or to their recoverable amounts, whichever is lower.

### 27.1.5. Accounting policy for impairment of property, plant and equipment and intangible assets

Property, plant and equipment and intangible assets with definitive lives are tested for impairment when there is an indication that the carrying amount may not be recoverable. Assets are assessed for impairment at the smallest identifiable group that generates largely independent cash inflows from other assets or groups of assets (CGU). Note 4.3 presents detailed information about the Company's CGUs.

Assets related to development and production of oil and gas assets (fields or group of fields) that have indefinite useful lives, such as goodwill, are tested for impairment at least annually, irrespective of whether there is any indication of impairment.

Considering the existing synergies between the Company's assets and businesses, as well as the expectation of the use of its assets for their remaining useful lives, value in use is generally used by the Company for impairment testing purposes. When specifically indicated, the Company assesses differences between its assumptions and assumptions that would be used by market participants in the determination of the fair value of an asset or CGU.

Reversal of previously recognized impairment losses may occur for assets other than goodwill.

### 27.2. Assets classified as held for sale

In 2020, the Company recognized reversals in the amount of US\$ 17 arising from the fair value of assets, net of disposal expenses, with the most significant relating to: the sale of Recôncavo group of fields (14 concessions located onshore and in shallow waters) in the amount of US\$ 35; the sale of Rio Ventura group of fields (8 concessions located onshore) in the amount of US\$ 18; the sale of Fazenda Belém group of fields, in the amount of US\$ 14; partially offset by a US\$ 62 impairment loss relating to Cartola and Ataulfo Alves vessels.

In 2019, as a result of the sale of several assets of the E&P segment, the Company recognized reversals in the amount of US\$ 558, considering the net fair value of disposal expenses, mainly: US\$ 494 relating to Pampo and Enchova Project (10 concessions located in shallow waters); US\$ 84 relating to Bispo project (in Frade field); US\$ 67 relating to Mangalarga project (in Maromba field), partially offset by a US\$ 89 impairment loss recognized on the sale of Petrobras Oil & Gas B.V. (PO & GBV).

In 2018, following the Company's Board of Director approvals for the disposal of certain assets, impairment reversals were accounted for amounting to US\$ 115 for assets held for sale, including the effects arising from the sale of onshore producing fields located in Potiguar basin.

The accounting policy for assets and liabilities held for sale is set out in note 32.

### **27.3. Investments in associates and joint ventures (including goodwill)**

Value in use is generally used for impairment test of investments in associates and joint ventures (including goodwill). The basis for estimates of cash flow projections includes: projections covering a period of 5 to 12 years, zero-growth rate perpetuity, budgets, forecasts and assumptions approved by management and a post-tax discount rate derived from the WACC or the Capital Asset Pricing Model (CAPM) models, specific for each case.

#### **27.3.1. Accounting policy for impairment of associates and joint ventures**

Investments in associates and joint ventures are tested individually for impairment. When performing impairment testing of an equity-accounted investment, goodwill, if it exists, is also considered part of the carrying amount to be compared to the recoverable amount.

Except when specifically indicated, value in use is generally used by the Company for impairment testing purposes in proportion to the Company's interests in the present value of future cash flow projections via dividends and other distributions.

#### **27.3.2. Investment in publicly traded associate**

##### **Braskem S.A.**

Braskem's shares are publicly traded on stock exchanges in Brazil and abroad. As of December 31, 2020, the quoted market value of the Company's investment in Braskem was US\$ 1,375 based on the quoted values of both Petrobras' interest in Braskem's common stock (47% of the outstanding shares), and preferred stock (22% of the outstanding shares). However, there is extremely limited trading of the common shares, since non-signatories of the shareholders' agreement hold only approximately 3% of the common shares.

Given the operational relationship between Petrobras and Braskem, the recoverable amount of the investment for impairment testing purposes was determined based on value in use, considering future cash flow projections and the manner in which the Company can derive value from this investment via dividends and other distributions to arrive at its value in use. As the recoverable amount was higher than the carrying amount, no impairment losses were recognized for this investment.

Cash flow projections to determine the value in use of Braskem were based on estimated prices of feedstock and petrochemical products reflecting international trends on prices, petrochemical products sales volume estimates reflecting projected Brazilian and global G.D.P. growth, post-tax discount rate (excluding inflation) of 8.7% p.a., considering cash flows from dividends, and decreases in the EBITDA margin during the growth cycle of the petrochemical industry in the next years and declining in the long-term. Estimated exchange rates and Brent prices are the same as those set out in note 27.1.2.

##### **Petrobras Distribuidora S.A.**

In July 2019, with the additional sale of the Company's interest in the subsidiary Petrobras Distribuidora S.A. (BR Distribuidora), carried out through a secondary public offering (follow-on), BR Distribuidora became an associate. Considering the fair value as the market value of its shares, at December 31, 2020, the Company estimated this investment was recoverable.

On August 26, 2020 the Company's Board of Directors approved the disposal of the remaining interest in this Company. Accordingly, the recoverable value of this investment took into account the value in use, including the disposal value, considering the intention to sell the shares. Thus, impairment testing resulted in a US\$ 459 loss.

The post-tax discount rate in constant currency applied was 11.1% p.a., considering the cost of equity.

#### **27.3.3. Investments in state-controlled natural gas distributors**

In 2020, impairment assessments on investments in state-controlled natural gas distributors did not give rise to any indication that these assets would be impaired, which carrying amount is US\$ 1,108. Post-tax discount rate (excluding inflation) used in such assessment was 5.7% p.a..

#### **27.3.4. Impairment losses on equity-accounted investments**

In the year ended December 31, 2020, the Company recognized impairment losses amounting to US\$ 59 (a US\$ 4 loss in 2019 and a US\$ 28 reversal in 2018), mainly in joint venture MP Gulf of Mexico (US\$ 59), due to the revised Brent prices projections (with a 5.4% p.a. post-tax discount rate in constant currency, applied for the E&P segment in the USA), and in BSBIOS (US\$ 22), resulting from the classification of this investment as held for sale, after the signing of the purchase and sale agreement by the Company's subsidiary Petrobras Biocombustível with RP Participações em Biocombustíveis, in December 2020.

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### 28. Exploration and evaluation of oil and gas reserves

The exploration and evaluation activities include the search for oil and gas reserves from obtaining the legal rights to explore a specific area to the declaration of the technical and commercial viability of the reserves.

Changes in the balances of capitalized costs directly associated with exploratory wells pending determination of proved reserves and the balance of amounts paid for obtaining rights and concessions for exploration of oil and natural gas (capitalized acquisition costs) are set out in the following table:

Capitalized Exploratory Well Costs / Capitalized Acquisition Costs (*)	12.31.2020	12.31.2019
Property plant and equipment		
Opening Balance	4,262	4,132
Additions	428	510
Write-offs	(197)	(216)
Transfers	(494)	-
Cumulative translation adjustment	(975)	(164)
Closing Balance	3,024	4,262
Intangible Assets (**)	14,526	18,919
<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs</b>	<b>17,550</b>	<b>23,181</b>

(\*) Amounts capitalized and subsequently expensed in the same period have been excluded from this table.

(\*\*) The signature bonuses related to the results of the 16th ANP bidding round and Surplus Oil of Transfer of Rights Agreement, in the amount of US\$ 15,341, are described in note 24.1 to the consolidated financial statements for the year ended December 31, 2019.

The transfers refer to the completion of exploratory well projects that are now associated with the proved reserves of existing fields, mainly Albacora (US\$ 421) and Búzios (US\$ 73).

Exploration costs recognized in the statement of income and cash used in oil and gas exploration and evaluation activities are set out in the following table:

	2020	2019	2018
<b>Exploration costs recognized in the statement of income</b>			
Geological and geophysical expenses	296	477	330
Exploration expenditures written off (includes dry wells and signature bonuses)	456	308	87
Contractual penalties	38	4	91
Other exploration expenses	13	10	16
<b>Total expenses</b>	<b>803</b>	<b>799</b>	<b>524</b>
<b>Cash used in :</b>			<b>0</b>
Operating activities	307	485	346
Investment activities	532	17,265	1,273
<b>Total cash used</b>	<b>839</b>	<b>17,750</b>	<b>1,619</b>

Exploration expenditures written off arise from projects without economic feasibility, mainly related to the reduction of exploratory wells in the Candy Park in the Espirito Santos Basin (US\$ 189) and signature bonus for the Peroba exploratory block (US\$ 155).

For the the year ended December 31, 2020, the Company recognized a provision arising from potential contractual penalties for non-compliance with minimum percentages of local content in 186 blocks for which the exploratory phases were concluded (125 for the year ended December 31, 2019).

#### 28.1. Accounting policy for exploration and evaluation of oil and gas reserves

The costs incurred in connection with the exploration, appraisal and development of crude oil and natural gas production are accounted for using the successful efforts method of accounting, as set out below:

- Geological and geophysical costs related to exploration and appraisal activities incurred until economic and technical feasibility can be demonstrated are expensed.

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- Amounts paid for obtaining concessions for exploration of crude oil and natural gas (capitalized acquisition costs) are initially capitalized as intangible assets and are transferred to property, plant and equipment once the technical and commercial feasibility can be demonstrated. More information on intangible assets accounting policy, see note 27.
- Costs directly attributable to exploratory wells, including their equipment and installations, pending determination of proved reserves are capitalized within property, plant and equipment. In some cases, exploratory wells have discovered oil and gas reserves, but at the moment the drilling is completed they are not yet able to be classified as proved. In such cases, the expenses continue to be capitalized if the well has found a sufficient quantity of reserves to justify its completion as a producing well and progress on assessing the reserves and the economic and operating viability of the project is under way (for more information see note 28.2). An internal commission of technical executives of the Company reviews these conditions monthly for each well, by analysis of geoscience and engineering data, existing economic conditions, operating methods and government regulations. For additional information on proved reserves estimates, see note 4.1.
- Costs related to exploratory wells drilled in areas of unproved reserves are charged to expense when determined to be dry or uneconomic by the aforementioned internal commission.
- Costs related to the construction, installation and completion of infrastructure facilities, such as drilling of development wells, construction of platforms and natural gas processing units, construction of equipment and facilities for the extraction, handling, storing, processing or treating crude oil and natural gas, pipelines, storage facilities, waste disposal facilities and other related costs incurred in connection with the development of proved reserve areas are capitalized within property, plant and equipment.

### 28.2. Aging of Capitalized Exploratory Well Costs

The following tables set out the amounts of exploratory well costs that have been capitalized for a period of one year or more after the completion of drilling, the number of projects whose costs have been capitalized for a period greater than one year, and an aging of those amounts by year (including the number of wells relating to those costs):

Aging of capitalized exploratory well costs (*)	12.31.2020	12.31.2019
Exploratory well costs capitalized for a period of one year	118	219
Exploratory well costs capitalized for a period greater than one year	2,906	4,043
<b>Total capitalized exploratory well costs</b>	<b>3,024</b>	<b>4,262</b>
Number of projects relating to exploratory well costs capitalized for a period greater than one year	38	43

	Capitalized costs (2020)	Number of wells
2019	152	6
2018	44	1
2017	39	1
2016	58	3
2015 and previous years	2,613	80
<b>Exploratory well costs that have been capitalized for a period greater than one year</b>	<b>2,906</b>	<b>91</b>

(\*) Amounts paid for obtaining rights and concessions for exploration of oil and gas (capitalized acquisition costs) are not included.

Exploratory well costs that have been capitalized for a period greater than one year since the completion of drilling relate to 38 projects comprising (i) US\$ 2,769 for wells in areas in which there has been ongoing drilling or firmly planned drilling activities in the near term and for which an evaluation plan (“Plano de Avaliação”) has been submitted for approval by ANP; and (ii) US\$ 137 relate to costs incurred to evaluate the reserves and their potential development.

### 29. Collateral for crude oil exploration concession agreements

The Company has granted collateral to ANP in connection with the performance of the Minimum Exploration Programs established in the concession agreements for petroleum exploration areas in the total amount of US\$ 1,631 of which US\$ 1,543 were still in force as of December 31, 2020, net of commitments undertaken. The collateral comprises crude oil from previously identified producing fields, pledged as collateral, amounting to US\$ 1,256 and bank guarantees of US\$ 287.

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## 30. Partnerships in E&P activities

In line with its strategic objectives, Petrobras operates in association with other companies in partnerships in Brazil as holder of oil and natural gas exploration and production rights in concessions and production sharing regimes.

As of December 31, 2020, the Company holds interests in 98 partnerships with 40 companies, among which Petrobras is the operator in 55 (in 2019, 112 partnerships with 42 companies and operator in 64). The partnerships formed in 2019 and 2020 are described below:

Consortium	Location	% Petrobras	% Partners	Operator	Year	Additional Information	ANP Bonus Petrobras portion
Tartaruga Verde Módulo III Espadarte	Campos Basin	50%	Petronas – 50%	Petrobras	2019	Concession – Disposal of 50% to Petronas	N/A
Búzios (Transfer of Rights Surplus)	Santos basin pre-salt	90%	CNODC – 5% CNOOC – 5%	Petrobras	2019	Production sharing – Transfer of Rights Surplus Production ANP Bidding Round	14,912
C-M-477 Aram	Campos Basin Santos basin pre-salt	70%	BP – 30% CNODC – 20%	Petrobras	2019	Concession - 16 <sup>th</sup> ANP Bidding Round Production sharing – 6 <sup>th</sup> ANP Bidding Round	348 982
BT-SEAL-13A	Sergipe Alagoas basin	50%	Petrogal – 50%	Petrogal	2020	Concession – split	N/A
BT-POT-55A	Potiguar basin	70%	Sonangol – 30%	Petrobras	2020	Concession – split	N/A

Partnerships brings benefits through risk sharing, increased investment capacity, technical and technological interchange, aiming at the growth in oil and gas production. The following table presents the production referring to Petrobras's participation in the main fields in which the Company is the operator in the partnership:

Field	Location	% Petrobras	% Partners	Petrobras production portion in 2020 (kboed)	Regime
Tupi (BMS-11)	Santos basin pre-salt	65%	Shell – 25% Petrogal – 10%	790,4	Concession
Roncador	Campos basin	75%	Equinor – 25%	132,1	Concession
Sapinhoá (BMS-9)	Santos basin pre-salt	45%	Shell – 30% Repsol Sinopec – 25%	119,0	Concession
Albacora Leste	Campos basin	90%	Repsol Sinopec - 10%	31,2	Concession
Mero	Santos basin pre-salt	40%	Total – 20% Shell – 20% CNODC – 10% CNOOC – 10%	12,5	Production sharing
Papa-Terra	Campos basin	62.5%	Chevron – 37.5%	12,2	Concession
Manati	Camamu basin	35%	Enauta Energia S.A. – 45% Brasoil – 10% Geopark – 10%	5,3	Concession
Berbigão	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	26,7	Concession
Sururu	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	8,7	Concession
Oeste de Atapu	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	1,6	Concession
Tartaruga Verde	Campos basin	50%	Petronas – 50%	48,8	Concession
<b>Total</b>				<b>1,188.5</b>	

### 30.1. Accounting policy for joint operations

The E&P partnerships are classified as joint operations, where the Company recognizes according to its interests: i) its assets, including its stake in any assets held jointly ii) its liabilities, including its stake in any liabilities assumed jointly; iii) its sales revenues corresponding to the proportion of its participation in the production resulting from the joint operation; iv) its portion on sales revenues realized directly by the joint operation; and v) its expenses, including the portion of any expenses incurred together.

Assets, liabilities, revenues and expenses relating to the participation in a joint operation are accounted for in accordance with the specific accounting policies applicable to assets, liabilities, revenues and expenses.

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### 30.2. Unitization Agreements

Petrobras has Production Individualization Agreements (AIP) signed in Brazil with partner companies (Shell, Petrogal, Repsol and Total) in E&P consortiums. These agreements result in reimbursements payable to (or receivable from) partners regarding expenses and production volumes related to Tupi, Sépia, Atapu, Berbigão, Sururu, Albacora Leste and other fields.

#### Berbigão, Sururu, Albacora Leste and others

The table below presents changes on the reimbursements payable relating to these fields:

	12.31.2020	12.31.2019
Opening balance	113	159
Additions/(Write-offs) on PP&E	278	50
Indexation charges	-	4
Payments made	(17)	(92)
Other income and expenses	(50)	(2)
Cumulative translation adjustments	46	(6)
<b>Closing balance</b>	<b>370</b>	<b>113</b>

As of December 31, 2020, Petrobras has reimbursements payable amounting to US\$ 370 (US\$ 113 on December 31, 2019). In 2020, these agreements resulted in payments and recognition of additions and write-offs in PP&E, in addition to other net expenses, reflecting the best available estimate of the assumptions used in calculating the calculation base and the sharing of relevant assets in areas to be equalized.

#### Tupi, Sépia and Atapu

On April 30, 2020, Petrobras and partner companies in E&P consortiums in Tupi, Sépia and Atapu fields signed the Agreements for the Equalization of Expenses and Volumes (AEGV). Thus, on May 29, 2020, as a result of the increase in interest in these three consortiums, Petrobras received from partner companies the amount of US\$ 441, in addition to US\$ 284 in PP&E, totaling US\$ 725 within other income and expenses.

Also as a result of these agreements, on May 1, 2020, the wholly owned subsidiary Petrobras Netherlands BV (PNBV) signed Share Purchase Agreements acquiring an additional interest in Tupi BV, for US\$ 84, and an additional interest in Iara BV (Atapu) for US\$ 805, subject to price adjustments. The computation of the acquisition price was based on the fair value of the acquired assets and related liabilities, bringing a net increase of US\$ 889 mainly in PP&E.

The price adjustment relating to the acquisition of interest in Tupi BV occurred on September 15, 2020, resulting in an additional payment of US\$ 13, registered as property, plant and equipment.

### 30.3. Accounting Policy for unitization agreements

A unitization agreement occurs when a reservoir extends across two or more license or contract areas. In this case, partners pool their individual interests in return for an interest in the overall unit and determine their new stake in the single producing unit.

Events that occurred prior to the unitization agreement may lead to the need for compensation between the partners. At the signing of the AIP, an amount to be reimbursed to the Company will be recognized as an asset only when there is a contractual right to reimbursement or when the reimbursement is practically certain. An amount to be reimbursed by the Company will be recognized as a liability when it derives from a contractual obligation or, when the outflow of funds is deemed probable and the amount can be reliably estimated.

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## 31. Investments

### 31.1. Information on direct subsidiaries, joint arrangements and associates

	Main business segment	% Petrobras' ownership	% Petrobras' voting rights	Shareholders' equity (deficit)	Net income (loss) for the year	Country
<b>Subsidiaries</b>						
Petrobras International Braspetro - PIB BV	Several	100	100	46,266	5,212	Netherlands
Petrobras Transporte S.A. - Transpetro	RT&M	100	100	951	258	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100	100	86	256	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51	51	435	64	Brazil
Petrobras Biocombustível S.A.	Corporate, others	100	100	275	30	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100	100	32	(49)	Brazil
Termomacaé S.A.	Gas & Power	100	100	86	4	Brazil
Braspetro Oil Services Company - Brasoil	Corporate, others	100	100	110	2	Cayman Islands
Breitener Energética S.A.	Gas & Power	94	94	139	6	Brazil
Termobahia S.A.	Gas & Power	99	99	115	1	Brazil
Baixada Santista Energia S.A.	Gas & Power	100	100	68	13	Brazil
Petrobras Comercializadora de Energia S.A.. - PBEN	Gas & Power	100	100	12	7	Brazil
Fundo de Investimento Imobiliário RB Logística - FII	E&P	99	99	3	(14)	Brazil
Procurement Negócios Eletrônicos S.A.	Corporate, others	72	72	4	(9)	Brazil
5283 Participações LTDA	Corporate, others	100	100	-	-	Brazil
Transportadora Brasileira Gasoduto Bolívia - Brasil S.A.	Gas & Power	51	51	81	111	Brazil
Refinaria de Mucuripe S.A. (i)	RT&M	100	100	-	-	Brazil
Refinaria de Manaus S.A. (ii)	RT&M	100	100	-	-	Brazil
Paraná Xisto S.A (i)	RT&M	100	100	-	-	Brazil
Refinaria de Mataripe S.A. (i)	RT&M	100	100	-	-	Brazil
<b>Joint operations</b>						
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50	50	40	14	Brazil
Ibiritermo S.A.	Gas & Power	50	50	23	9	Brazil
<b>Joint ventures</b>						
Logum Logística S.A.	RT&M	30	30	157	(64)	Brazil
Cia Energética Manauara	Gas & Power	40	40	38	3	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50	50	37	21	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33	33	3	(12)	Brazil
Brasympe Energia S.A.	Gas & Power	20	20	14	-	Brazil
Brentech Energia S.A.	Gas & Power	30	30	20	6	Brazil
Metanor S.A. - Metanol do Nordeste	RT&M	35	35	12	3	Brazil
Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49	49	5	-	Brazil
Eólica Mangue Seco 3 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49	49	6	-	Brazil
Eólica Mangue Seco 1 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49	49	4	-	Brazil
Eólica Mangue Seco 2 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	51	51	4	-	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45	45	-	-	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOS	Corporate, others	50	50	-	-	Brazil
GNL Gemini Comercialização e Logística de Gás LTDA.	Gas & Power	40	40	30	4	Brazil
<b>Associates</b>						
Braskem S.A. (ii)	E&P	36	47	(859)	(1,531)	Brazil
UEG Araucária Ltda.	E&P	19	19	26	(39)	Brazil
Petrobras Distribuidora S.A. - BR (ii)	Corporate, others	38	38	1,850	147	Brazil
Deten Química S.A.	RT&M	28	28	110	41	Brazil
Energética SUAPE II S.A.	Corporate, others	20	20	82	24	Brazil
Termoelétrica Potiguar S.A. - TEP	Gas & Power	20	20	47	4	Brazil
Nitrocolor Produtos Químicos LTDA.	RT&M	39	39	-	-	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30	30	-	-	Brazil
Nova Transportadora do Sudeste S.A. - NTS	Gas & Power	10	10	412	490	Brazil
Transportadora Sulbrasileira de Gás - TSB	Gas & Power	25.00	25.00	4	1	Brazil

(i) Companies legally established, with capital contribution of US\$ 58 thousand for each company.

(ii) Equity and net income at September 30, 2020, most current public information.

In 2020, the Company had the following corporate restructuring:

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i) Transportadora Associada de Gás S.A., Liquegás Distribuidora S.A., Investimentos e Participações de Sondas (FIP Sondas) and Sete Brasil Participações S.A. were divested;

ii) Termomacaé Comercializadora de Energia S.A. (TMC) was merged into Petrobras Comercializadora de Energia (PBEN);

iii) Petrobras Negócios Eletrônicos S.A. (E-Petro) was merged into Petrobras, with no capital increase. Thus, Procurement Negócios Eletrônicos became a subsidiary of Petrobras;

iv) Creation of subsidiaries Refinaria de Mucuripe S.A., Refinaria de Manaus S.A., Paraná Xisto S.A. and Refinaria de Mataripe S.A. (see note 32.3).

The main investees of PIB BV are:

- Petrobras Global Trading B.V. – PGT (100%, based in the Netherlands), dedicated to the trade of oil, oil products, biofuels and LNG (liquefied natural gas), as well as to the funding of its activities in light of Petrobras;
- Petrobras Global Finance B.V. – PGF (100%, based in the Netherlands); the finance subsidiary of Petrobras, raising funds through bonds issued in the international capital market;
- Petrobras America Inc. – PAI (100%, based in the United States), dedicated to E&P activities (MP Gulf of Mexico, LLC); and
- PNBV (100%, based in the Netherlands), operates through joint operations in Tupi BV (65%), Guará BV (45%), Agri Development BV (90%), Libra (40%), Papa Terra BV (62.5%), Roncador BV (75%), Iara BV (42.5%) and Lapa BV (10%), dedicated to the construction and lease of equipment and platforms for Brazilian E&P consortia. In December 2020, PNBV transferred to Sete Brasil, for the symbolic amount of 7 Euros, its 15% equity interest which held in each of the Dutch structured entities controlled by Sete Brasil: Arpoador Drilling B.V., Marambaia Drilling B.V., Grumari Drilling B.V., Copacabana Drilling B.V., Leme Drilling B.V., Leblon Drilling B.V. and Ipanema Drilling B.V. After this disposal, Petrobras no longer holds any interests in subsidiaries of Sete Brasil.

On January 14, 2020, PIB BV concluded the sale of its remaining 50% interest in Petrobras Oil & Gas B.V. - PO & GBV to Petrovida Holding B.V.

## 31.2. Investments in associates and joint ventures

	Balance at 12.31.2019	Investments	Transfer to assets held for sale	Restructuring, capital decrease and others	Results in equity- accounted investments	CTA	OCI	Dividends	Balance at 12.31.2020
<b>Joint Ventures</b>	<b>1,192</b>	<b>7</b>	<b>(65)</b>	<b>(2)</b>	<b>(91)</b>	<b>(133)</b>	<b>-</b>	<b>(95)</b>	<b>813</b>
MP Gulf of Mexico, LLC/PIB BV	577	-	-	3	(179)	-	-	(35)	366
Distribuidoras Estaduais de Gás Natural/Gaspetro	380	-	-	-	58	(87)	-	(53)	298
Compañía Mega S.A. - MEGA	79	-	-	-	10	(7)	-	-	82
Other joint ventures	156	7	(65)	(5)	20	(39)	-	(7)	67
<b>Associates (*)</b>	<b>4,302</b>	<b>8</b>	<b>-</b>	<b>(196)</b>	<b>(568)</b>	<b>(667)</b>	<b>(292)</b>	<b>(132)</b>	<b>2,455</b>
Nova Transportadora do Sudeste	239	-	-	(12)	49	(54)	-	(46)	176
Transportadora Associada de Gás S.A.	283	-	-	(202)	19	(82)	(18)	-	-
Others Associates	3,780	8	-	18	(636)	(531)	(274)	(86)	2,279
<b>Other investments</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(3)</b>	<b>3</b>	<b>-</b>	<b>5</b>
<b>Total</b>	<b>5,499</b>	<b>15</b>	<b>(65)</b>	<b>(198)</b>	<b>(659)</b>	<b>(803)</b>	<b>(289)</b>	<b>(227)</b>	<b>3,273</b>

(\*) It includes Petrobras Distribuidora and Braskem, mainly hedge accounting on future exports and provision for decommissioning costs of halite deposits.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***31.3. Investments in non-consolidated listed companies**

	Thousand-share lot		Type	Quoted stock exchange prices (US\$ per share)		Fair value	
	12.31.2020	12.31.2019		12.31.2020	12.31.2019	12.31.2020	12.31.2019
<b>Associate</b>							
Petrobras Distribuidora S.A.	436,875	436,875	Common	4.26	7.46	1,860	3,259
						<b>1,860</b>	<b>3,259</b>
<b>Associate</b>							
Braskem S.A.	212,427	212,427	Common	4.85	7.82	1,031	1,662
Braskem S.A.	75,762	75,762	Preferred A	4.54	7.41	344	561
						<b>1,375</b>	<b>2,223</b>

The fair value of these shares does not necessarily reflect the realizable value upon sale of a large block of shares.

**Braskem S.A. and BR Distribuidora S.A. - Investments in non-consolidated listed companies**

Information on the main estimates used in the cash flow projections to determine the value in use of Braskem and BR Distribuidora is set out in Note 27.3.

**31.4. Non-controlling interest**

The total amount of non-controlling interest at December 31, 2020 is US\$ 528 (US\$ 892 in 2019) primarily comprising US\$ 213 of Gaspetro (US\$ 263 in 2019), US\$ 65 of Consolidated Structured Entities (US\$ 203 in 2019), US\$ 192 of FIDC (US\$ 343 in 2019), and US\$ 39 of Transportadora Brasileira Gasoduto Brasil-Bolívia – TBG (US\$ 69 in 2019).

Condensed financial information is set out as follows:

	Gaspetro		Consolidated Structured entities		FIDC		TBG	
	2020	2019	2020	2019	2020	2019	2020	2019
Current assets	81	91	897	793	3,951	16,377	228	154
Long-term receivables	50	61	460	586	-	-	-	-
Investments	298	380	-	-	-	-	-	-
Property, plant and equipment	-	1	-	-	-	-	313	430
Other non-current assets	53	73	1	-	-	-	3	3
	<b>482</b>	<b>606</b>	<b>1,358</b>	<b>1,379</b>	<b>3,951</b>	<b>16,377</b>	<b>544</b>	<b>587</b>
Current liabilities	25	40	1,043	8	1	6	206	105
Non-current liabilities	23	28	132	1,104	-	-	257	340
Shareholders' equity	434	538	183	267	3,950	16,371	81	142
	<b>482</b>	<b>606</b>	<b>1,358</b>	<b>1,379</b>	<b>3,951</b>	<b>16,377</b>	<b>544</b>	<b>587</b>
Sales revenues	83	136	-	-	-	-	310	426
Net income	64	89	(195)	41	416	910	111	180
Increase (decrease) in cash and cash equivalents	(4)	7	227	16	2	786	25	3

Gaspetro, a Petrobras' subsidiary, holds interests in several state distributors of natural gas in Brazil. The Company holds 51% of interests in this indirect subsidiary.

The structured entities are Charter Development LLC (CDC), dedicated to construct, acquire and charter FPSOs, and Companhia de Desenvolvimento e Modernização de Plantas Industriais (CDMPI), which is dedicated to coking and hydrotreating of coke naphtha from Henrique Lage refinery (REVAP).

The Credit Rights Investment Fund (FIDC) is a fund mainly intended to securitize "performed" and "non-performed" credits for operations carried out by the Company's subsidiaries, aiming to optimize cash management.

TBG is an indirect subsidiary which operates in natural gas transmission activities mainly through Bolivia-Brazil Gas Pipeline. The Company holds 51% of interests in this indirect subsidiary.

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### 31.5. Summarized information on joint ventures and associates

The Company invests in joint ventures and associates in Brazil and abroad, whose activities are related to petrochemical, refining, production, trade and logistics of oil products, gas distribution, biofuels, thermoelectric power plants, and other activities. Condensed financial information is set out below:

	2020						2019		
	Joint ventures			Associates			Joint ventures		Associates
	In Brazil	MP Gulf of Mexico, LLC	Other companies abroad	In Brazil	In Brazil	MP Gulf of Mexico, LLC	Other companies abroad	In Brazil	
Current assets	795	277	137	9,968	1,147	372	165	9,226	
Non-current assets	385	259	4	3,941	486	–	5	4,880	
Property, plant and equipment	492	2,380	62	9,914	641	3,132	48	20,210	
Other non-current assets	482	2	–	761	634	–	–	1,579	
	<b>2,154</b>	<b>2,918</b>	<b>203</b>	<b>24,584</b>	<b>2,908</b>	<b>3,504</b>	<b>218</b>	<b>35,895</b>	
Current liabilities	573	228	58	7,279	790	237	74	6,751	
Non-current liabilities	661	789	17	15,246	808	373	19	28,878	
Shareholders' equity	887	1,535	81	2,358	1,270	2,317	79	255	
Non-controlling interest	33	366	47	(299)	40	577	46	11	
	<b>2,154</b>	<b>2,918</b>	<b>203</b>	<b>24,584</b>	<b>2,908</b>	<b>3,504</b>	<b>218</b>	<b>35,895</b>	
Sales revenues	2,056	748	–	28,425	1,610	1,300	–	40,218	
Net Income (loss) for the year	93	(607)	9	(241)	246	423	17	2,416	
Ownership interest - %	23.5 to 83%	20%	34 to 45%	4.59 to 40%	20 to 51.5%	20%	34 to 45%	4.59 to 40%	

### 31.6. Accounting policy for investments in subsidiaries, joint operations, joint ventures and associates

#### Basis of consolidation

The consolidated financial statements include the financial information of Petrobras and the entities it controls (subsidiaries), joint operations (at the level of interest the Company has in them) and consolidated structured entities.

Control is achieved when Petrobras: i) has power over the investee; ii) is exposed, or has rights, to variable returns from involvement with the investee; and iii) has the ability to use its power to affect its returns.

Subsidiaries are consolidated from the date on which control is obtained until the date that such control no longer exists, by using accounting policies consistent with those adopted by Petrobras. Note 11 sets out the consolidated entities and other direct investees.

Investments structured through a separate vehicle are set up so that the voting rights, or similar rights, are not the dominant factor to determine who controls the entity. At December 31, 2020, Petrobras controls and consolidates the following structured entities: CDC (U.S.A., E&P); CDMPI (Brazil, RT&M) and FIDC (Brazil, Corporate, others).

Intragroup balances and transactions, including unrealized profits arising from intragroup transactions, are eliminated in the consolidation of the financial statements.

#### Investments in other companies

An associate is an entity over which the Company has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but not the ability to exercise control or joint control over those policies. The definition of control is set out in note 4.1.

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A joint arrangement is an arrangement over which two or more parties have joint control (pursuant to contractual provisions). A joint arrangement is classified either as a joint operation or as a joint venture depending on the rights and obligations of the parties to the arrangement.

In a joint operation, the parties have rights to the assets and obligations for the liabilities related to the arrangement, while in a joint venture the parties have rights to the net assets of the arrangement. Some of the Company's activities in the E&P segment are conducted through joint operations.

Profit or loss, assets and liabilities related to joint ventures and associates are accounted for by the equity method. In a joint operation the Company recognizes the amount of its assets, liabilities and related income and expenses.

Accounting policies of joint ventures and associates have been adjusted, where necessary, to ensure consistency with the policies adopted by Petrobras. Distributions received from an investee reduce the carrying amount of the investment.

### **Business combination and Goodwill**

A business combination is a transaction in which the acquirer obtains control of another business, regardless its legal form. Acquisitions of businesses are accounted for using the acquisition method when control is obtained. Combinations of entities under common control are accounted for at cost. The acquisition method requires that the identifiable assets acquired and the liabilities assumed be measured at the acquisition-date fair value, with limited exceptions.

Goodwill is measured as the excess of the aggregate amount of: (i) the consideration transferred; (ii) the amount of any non-controlling interest in the acquiree; and (iii) in a business combination achieved in stages, the fair value of the acquirer's previously held equity interest in the acquiree at the acquisition-date; over the net of the amounts of the identifiable assets acquired and the liabilities assumed. When this aggregate amount is lower than the net of the amounts of the identifiable assets acquired and the liabilities assumed, a gain on a bargain purchase is recognized in the statement of income.

Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Any excess of the amounts paid/received, including directly attributable costs, over the carrying value of the ownership interest acquired/disposed of is recognized in shareholders' equity as changes in interest in subsidiaries.

## **32. Disposal of assets and other changes in organizational structure**

The Company has an active partnership and divestment portfolio, which takes into account opportunities for disposal of non-strategic assets in several areas in which it operates, whose development of transactions also depends on conditions beyond the control of the Company. The divestment projects and strategic partnerships follow the procedures aligned with the guidelines of the Brazilian Federal Auditor's Office (*Tribunal de Contas da União – TCU*) and the current legislation.

The major classes of assets and related liabilities classified as held for sale are shown in the following table:

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							12.31.2020	12.31.2019
	E&P	Gas & RT&M Power	Biofuels	Distribution	Corporate and other business	Total	Total	
<b>Assets classified as held for sale</b>								
Cash and cash equivalents	1	-	-	-	13	-	14	5
Trade receivables	-	-	-	-	24	-	24	68
Inventories	-	-	-	-	4	-	4	13
Investments	-	-	19	49	-	-	68	355
Property, plant and equipment	600	19	-	-	21	-	640	2,046
Others	-	-	-	-	35	-	35	77
<b>Total</b>	<b>601</b>	<b>19</b>	<b>19</b>	<b>49</b>	<b>97</b>	<b>-</b>	<b>785</b>	<b>2,564</b>
<b>Liabilities on assets classified as held for sale</b>								
Trade payables	1	-	-	-	21	-	22	27
Finance debt	-	-	-	-	5	8	13	142
Provision for decommissioning costs	640	-	-	-	-	-	640	2,961
Others	-	-	-	-	10	-	10	116
<b>Total</b>	<b>641</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36</b>	<b>8</b>	<b>685</b>	<b>3,246</b>

## 32.1. Transactions pending closing at December 31, 2020

Transaction	Acquirer	Signature date	Transaction amount (*)	Further information
Exercise of the put option to transfer the remaining interest (10%) in Lapa field to Total, in block BM-S-9, as provided in the contract signed in January 2018, when Total acquired a 35% interest on this field, becoming the operator of the field.	Total	December 2018	50	a
Sale of 30% of the Frade field concession. The transaction also includes the sale of the entire stake held by the subsidiary Petrobras Frade Inversiones S.A. (PFISA), in the company Frade BV, which owns the offshore assets used in the production development of this field.	PetroRio	November 2019	100	b
Sale of the Company's entire interest in the onshore fields Fazenda Belém and Icapuí, called Fazenda Belém group, located in the Potiguar basin, in the state of Ceará.	SPE Fazenda Belém S.A., subsidiary of 3R Petroleum e Participações S.A.	August 2019	35	c
Sale of the Company's entire interest in eight onshore fields, called Rio Ventura group, located in the in the state of Bahia.	SPE Rio Ventura S.A., subsidiary of 3R Petroleum e Participações S.A	August 2020	51	d
Sale of the Company's entire interest in 27 onshore fields, called Cricaré group, located in the in the state of Espírito Santo.	Karavan SPE Cricaré S.A. (51%) and Seacrest Capital Group Limited (49% and equity provider)	August 2020	37	e
Sale of the Company's entire interest in Petrobras Uruguay Distribución S.A. (PUDSA).	DISA Corporación Petrolífera S.A.	August 2020	62	f
Sale of the Company's entire interest in 14 onshore fields, called Recôncavo group of fields, located in the state of Bahia.	Ouro Preto Energia Onshore S.A, subsidiary of Petroleum Óleo e Gás S.A..	December 2020	250	g
Sale of the Company's entire interest in 12 onshore fields, called Remanso group of fields, located in the state of Bahia.	Petrorecôncavo S.A.	December 2020	30	h
Petrobras Biocombustível S.A. (PBio) signed a contract for the sale of all of its shares issued by BSBios Indústria e Comércio de Biodiesel Sul Brasil S.A. (BSBios) (50% of the share capital).	RP Participações em Biocombustíveis S.A	December 2020	62 (R\$ 320 million)	i
Sale of its 49% interest in the company Eólica Mangue Seco 1 - Geradora e Comercializadora de Energia Elétrica S.A. ("Eólica Mangue Seco 1).	V2I Transmissão de Energia Elétrica S.A.	January 2021	8 (R\$ 42 million)	j
Sale with Wobben Windpower Indústria e Comércio Ltda (Wobben) of all interests (51% Wobben and 49% Petrobras) in the companies Eólica Mangue Seco 3 - Geradora e Comercializadora de Energia Elétrica SA ("Eólica Mangue Seco 3") and Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia Elétrica SA ("Eólica Mangue Seco 4").	V2I Transmissão de Energia Elétrica S.A.	January 2021	17 (R\$ 90 million)	k

(\*) Only amounts considered at the signing of the transaction.

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### a) Sale of Lapa field – Strategic alliance with Total

The transaction is subject to price adjustments and to the fulfillment of certain conditions precedent.

### b) Sale of Frade field

Amounts due to Petrobras are composed of: (i) US\$ 7.5 was paid at the contract signing; (ii) US\$ 92.5 to be paid at the closing of the transaction, subject to price adjustments. In addition, there is a contingent payment amounting to US\$ 20 subject to a new discovery in the field.

### c) Sale of onshore fields in Ceará – Fazenda Belém group of fields

Amounts due to Petrobras are composed of: (i) US\$ 9 was paid at the contract signing; (ii) US\$ 16 to be paid at the transaction closing; and (iii) US\$ 10 to be paid in twelve months after the transaction closing.

This sale is subject to price adjustments and to the fulfillment of conditions precedent, mainly ANP approval.

### d) Sale of onshore fields in Bahia – Ventura group of fields

Amounts due to Petrobras are composed of: (i) US\$ 4 was paid at the contract signing; (ii) US\$ 31 to be paid at the transaction closing; (iii) US\$ 16 to be paid in thirty months after the transaction closing. In addition, there is the contingent payment of up to US\$ 43 provided for in the contract, depending on future oil prices negotiated between the parties.

This sale is subject to price adjustments and to the fulfillment of conditions precedent, mainly ANP approval.

### e) Sale of onshore fields in Espírito Santo – Cricaré group of fields

Amounts due to Petrobras are composed of (i) US\$ 11 paid at the contract signing; and (ii) US\$ 26 to be paid at the transaction closing. In addition, there are up to US\$ 118 of contingent payments, of which US\$ 88 depending on future oil prices negotiated between the parties, and US\$ 30 conditioned to the ANP approval of the extension of the concession terms for nine fields considered major by the acquirer (São Mateus, Rio Itaúnas, Cedro Farm, Lagoa Suruaca, São Jorge Farm, São Mateus River, Campo Grande, Mariricu and Mariricu Norte).

This sale is subject to price adjustments and to the fulfillment of conditions precedent, such as ANP approval and environmental licenses to be granted by local regulatory agencies.

### f) Sale of Petrobras Uruguay Distribución S.A. (PUDSA)

Amounts due to Petrobras are composed of (a) US\$ 6 were paid at the contract signing; and (b) US\$ 56 to be paid at the transaction closing.

This sale is subject to price adjustments and to the fulfillment of conditions precedent, such as approval by the Uruguayan Competition Defense Authority.

### g) Sale of onshore fields in Bahia – Recôncavo group of fields

Amounts due to Petrobras are composed of: (i) US\$ 10 was paid at the contract signing; and (ii) US\$ 240 to be paid at the transaction closing.

This sale is subject to price adjustments and to the fulfillment of conditions precedent, mainly ANP approval.

### h) Sale of onshore fields in Bahia – Remanso group of fields

Amounts due to Petrobras are composed of: (i) US\$ 4 was paid at the contract signing; (ii) US\$ 21 to be paid at the transaction closing; and (iii) US\$ 5 to be paid in twelve months after the transaction closing.

This sale is subject to price adjustments and to the fulfillment of conditions precedent.

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#### i) Sale of BSBios

The sale amount, including inflation indexation, will be deposited in escrow accounts, due to the PBio's interest in BSBios. This amount is subject to usual adjustments for transactions of this nature.

PBio will be able to draw down US\$ 49 (R\$ 255 million) from the escrow account at the transaction closing, and US\$ 13 (R\$ 67 million) will draw down for the indemnification of eventual contingencies and released according to the terms and conditions set forth in the contract.

#### j) Sale of Eólica Mangue Seco 1

Amount to be paid to Petrobras in a single installment at the transaction closing, subject to price adjustments provided for in the contract.

#### k) Sale of Eólica Mangue Seco 3 and 4

Amounts due to Petrobras are composed of: US\$ 4 (R\$ 23 million) at the signing of the contract and US\$ 13 (R\$ 67 million) at the transaction closing, subject to price adjustments provided for in the contracts.

## 32.2. Closed transactions during 2020

Transaction	Acquirer	Signature date (S) Closing date (C)	Sale amount	Gain/(loss)	Further information
Sale of the Company's 50% interest in PO&GBV to Petrovida Holding B.V. (PO&GBV), a joint venture registered in the Netherlands consisting of assets located in Nigeria.	Petrovida Holding B.V	October 2018 (S) January 2020 (C)	1,454	2	a
Sale of Pampo and Enchova groups (Enchova, Enchova Oeste, Marimbá, Piraúna, Bicudo, Bonito, Pampo, Trilha, Linguado and Badejo fields), located in shallow Waters in the Campos basin.	Trident Energy do Brasil LTDA, subsidiary of Trident Energy L.P	July 2019 (S) July 2020 (C)	419	364	b
Sale of onshore and offshore fields in Macau group (Aratum, Macau, Serra, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu), in the Potiguar Basin.	SPE 3R Petroleum S.A., subsidiary of 3R Petroleum e Participações S.A.	August 2019 (S) May 2020 (C)	174	75	c
Purchase and sale agreement for the sale of the Company's remaining 10% interest in Transportadora Associada de Gás S.A. (TAG).	Group formed by ENGIE and Caisse de Dépôt et Placement du Québec (CDPQ).	July 2020 (S) July 2020 (C)	191	28	d
Sale of the Company's interest in the Baúna field (awarded area BM-S-40), located in shallow waters in the Santos Basin.	Karoon Petróleo & Gás Ltda (Karoon), subsidiary of Karoon Energy Ltd.	July 2019 (S) November 2020 (C)	240	273	e
Sale of the Company's interest in Liquigás Distribuidora S.A	Copagaz e Nacional Gás Butano	November 2019 (S) December 2020 (C)	784	531	-
			<b>3,262</b>	<b>1,273</b>	

#### a) Sale of Petrobras's interest in Petrobras Oil & Gas B.V. (PO&GBV)

On January 14, 2020, the transaction was closed, in the amount of US\$ 1,454, reflecting price adjustments and the deduction of Petrobras' portion from the payment of fees to the Nigerian Government for approval of the transaction. Cumulative amounts of dividends received from PO&GBV since inception of investment (January 1, 2018) have totaled US 1,030. At the closing, the Company received US\$ 276, additional US\$ 25 was received in June 2020, and the remaining US\$ 123 to be received as soon as the Abgami field redetermination process is implemented, up to five years after the transaction closing.

#### b) Sale of Pampo and Enchova groups of fields

At the transaction closing, the Company received US\$ 366 after the fulfillment of all the conditions precedent and the inclusion of additional conditions, providing for the payment of amounts of up to US\$ 650 classified as contingent assets, to be recognized when the agreed conditions are met.

The amount received at the transaction closing in addition to the US\$ 53 paid to Petrobras upon the contract signing, totaling US\$ 419.

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### c) Sale of fields in Macau group of fields

Petrobras held a 100% interest in all these concessions, except for the Sanhaçu field, in which it held a 50% interest (the other 50% belongs to Petrogal).

The sale amount includes price adjustments provided for in the contract and the installment received on August 9, 2019, in the signing of the contract.

### d) Sale of remaining interest in Transportadora Associada de Gás (TAG)

The transaction was closed and fully paid on the date of the signing of the contract, after the deduction of US\$ 21 of dividends paid to Petrobras in June 2020 and other price adjustments.

In addition to the gain on the transaction, a US\$ 43 loss relating to the cash flow hedge accumulated in comprehensive income since the sale of TAG's control in June 2019 was reclassified to the statement of income, within other income and expenses.

### e) Sale of Baúna field

Due to the economic effects caused by the COVID-19 pandemic and the consequent difficulty in meeting the conditions precedent originally set, the parties defined adjustments to the terms of the contract and the payment of the transaction value.

After the fulfillment of conditions precedent, the transaction was closed with the payment of US\$ 150, which adds up to the US\$ 50 already paid at the contract signing. The remaining balance of US\$ 40 will be paid in 18 monthly installments after the transaction closing. In addition, a contingent installment of US\$ 285 may be paid by 2026, depending on future oil prices negotiated between the parties.

## 32.3. Other operations

### a) Contingent installment of the exploratory block BM-S-8 sale

On July 28, 2016, the Board of Directors of Petrobras approved the disposal of the Company's 66% interest in the exploratory block BM –S-8 to Statoil Brasil Óleo e Gás Ltda, which includes the Bacalhau field (former Carcará area) located in the pre-salt of Santos Basin, for the amount of US\$ 2,500.

The first installment (US\$ 1,250) was received on November 22, 2016, and the second installment (US\$ 300) on March 21, 2018.

The third installment (US\$ 950) is still pending, linked to submission for approval of the Production Individualization Agreements (AIP) to the ANP. The AIP was submitted to ANP by Equinor on January 29, 2021 and payment will occur on its approval or twelve months after its submission, whichever occurs first.

## 32.4. Cash flows from sales of interest with loss of control

In 2020 and 2019, the Company disposed of its interest in certain subsidiaries over which control was lost. The following table summarizes cash flows arising from losing control in subsidiaries:

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	Cash received	Cash in subsidiary before losing control	Net Proceeds
<b>2020</b>			
Petrobras Oil & Gas B.V.(PO&GBV) (*)	276	–	276
Liquigas	784	(10)	774
<b>Total</b>	<b>1,060</b>	<b>(10)</b>	<b>1,050</b>
<b>2019</b>			
Petrobras Paraguay	381	(45)	336
<b>Total</b>	<b>381</b>	<b>(45)</b>	<b>336</b>

**32.5. Accounting Policy for assets and liabilities held for sale**

Non-current assets, disposal groups and liabilities directly associated with those assets are classified as held for sale if their carrying amounts will, principally, be recovered through the sale transaction rather than through continuing use.

The condition for classification as held for sale is met only when the sale is approved by the Company's Board of Directors and the asset or disposal group is available for immediate sale in its present condition and there is the expectation that the sale will occur within 12 months after its classification as held for sale. However, an extended period required to complete a sale does not preclude an asset (or disposal group) from being classified as held for sale if the delay is caused by events or circumstances beyond the Company's control and there is sufficient evidence that the Company remains committed to its plan to sell the assets (or disposal groups).

Assets (or disposal groups) classified as held for sale and the associated liabilities are measured at the lower of their carrying amount and fair value less costs to sell. Assets and liabilities are presented separately in the statement of financial position.

When a component of the Company is disposed of or classified as held for sale, and it represented a separate major line of business, the disposed interest is considered a discontinued operation, thus its net income, operating, investing and financing cash flows are presented in separate line items until the date of the closing of the operation.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***33. Assets by operating segment**

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Elimina- tions	Total
<b>Consolidated assets by operating segment - 12.31.2020</b>						
Current assets	5,333	8,170	1,975	15,337	(3,427)	27,388
Non-current assets	114,947	23,879	8,321	15,473	2	162,622
Long-term receivables	4,745	2,539	976	11,938	2	20,200
Investments	390	400	607	1,876	-	3,273
Property, plant and equipment	95,222	20,842	6,614	1,523	-	124,201
Operating assets	84,916	18,304	4,300	1,238	-	108,758
Under construction	10,305	2,537	2,315	286	-	15,443
Intangible assets	14,590	98	124	136	-	14,948
<b>Total Assets</b>	<b>120,280</b>	<b>32,049</b>	<b>10,296</b>	<b>30,810</b>	<b>(3,425)</b>	<b>190,010</b>
<b>Consolidated assets by operating segment - 12.31.2019</b>						
Current assets	5,734	12,273	1,932	12,700	(4,827)	27,812
Non-current assets	148,546	31,248	10,781	11,390	(37)	201,928
Long-term receivables	6,456	3,299	1,369	6,567	-	17,691
Investments	592	1,109	1,067	2,731	-	5,499
Property, plant and equipment	122,496	26,710	8,181	1,915	(37)	159,265
Operating assets	106,331	23,630	5,605	1,784	(37)	137,313
Under construction	16,165	3,080	2,576	131	-	21,952
Intangible assets	19,002	130	164	177	-	19,473
<b>Total Assets</b>	<b>154,280</b>	<b>43,521</b>	<b>12,713</b>	<b>24,090</b>	<b>(4,864)</b>	<b>229,740</b>

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### 34. Finance debt

#### 34.1. Balance by type of finance debt

	12.31.2020	12.31.2019
<b>In Brazil</b>		
Banking Market	5,016	5,322
Capital Market	2,512	3,468
Development banks	1,315	1,927
Others	11	13
<b>Total</b>	<b>8,854</b>	<b>10,730</b>
<b>Abroad</b>		
Banking Market	13,581	16,555
Capital Market	27,625	32,476
Development banks	201	40
Export Credit Agency	3,424	3,233
Others	203	226
<b>Total</b>	<b>45,034</b>	<b>52,530</b>
<b>Total finance debt</b>	<b>53,888</b>	<b>63,260</b>
Current	4,186	4,469
Non-current	49,702	58,791

Current finance debt is composed of:

	12.31.2020	12.31.2019
Short-term debt	1,140	2,004
Current portion of long-term debt	2,383	1,579
Accrued interest on short and long-term debt	663	886
<b>Total</b>	<b>4,186</b>	<b>4,469</b>

At December 31, 2020, there was no default, breach of covenants or change in collateral provided or clauses that would result in change in payment terms compared December 31, 2019.

#### 34.2. Changes in finance debt and reconciliation with cash flows from financing activities

	Balance at 12.31.2018	Additions	Principal amorti- zation (*)	Interest amorti- zation (*)	Accrued interest (**)	Foreign exchange/ inflation indexation charges	Cumulative translation adjustment (CTA)	Modification of contractual cash flows	Transfer to liabilities classified as held for sale	Balance at 12.31.2019
<b>In Brazil</b>	16,251	2,181	(5,663)	(745)	829	111	(352)	-	(1,882)	10,730
<b>Abroad</b>	67,924	5,362	(20,788)	(3,853)	3,878	538	(560)	29	-	52,530
	<b>84,175</b>	<b>7,543</b>	<b>(26,451)</b>	<b>(4,598)</b>	<b>4,707</b>	<b>649</b>	<b>(912)</b>	<b>29</b>	<b>(1,882)</b>	<b>63,260</b>

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(Expressed in millions of US Dollars, unless otherwise indicated)

	Balance at 12.31.2019	Additions	Principal amorti- zation (*)	Interest amorti- zation (*)	Accrued interest (**)	Foreign exchange/ inflation indexation charges	Cumulative translation adjustment (CTA)	Modification of contractual cash flows	Transfer to liabilities classified as held for sale	Balance at 12.31.2020
In Brazil	10,730	1,488	(1,080)	(352)	399	142	(2,473)	-	-	8,853
Abroad	52,530	15,535	(23,471)	(2,967)	3,187	1,667	(1,201)	(245)	-	45,035
	<b>63,260</b>	<b>17,023</b>	<b>(24,551)</b>	<b>(3,319)</b>	<b>3,586</b>	<b>1,809</b>	<b>(3,674)</b>	<b>(245)</b>	<b>-</b>	<b>53,888</b>
Debt restructuring			(1,176)	-						
Deposits linked to financing			-	162						
<b>Net cash used in financing activities</b>			<b>(25,727)</b>	<b>(3,157)</b>						

(\*) It includes pre-payments.

(\*\*) It includes premium and discount over notional amounts, as well as gains and losses by modifications in contractual cash flows.

For the year ended December 31, 2020, in line with the Company's Business and Management Plan and following its liability management strategy, funds were raised mainly in order to settle older debts and manage liabilities, aiming at improving the debt repayment profile taking into account its alignment with investments returns over the long run, and also to have cash reserve to maintain the Company's liquidity.

In the year ended December 31, 2020, proceeds from financing amounted to US\$ 17,023, principally reflecting: (i) funds raised from banking market (in Brazil and abroad), in the amount of US\$ 3,153, and (ii) use of revolving credit lines, in the amount of US\$ 8 billion and (iii) global notes issued in the capital market in the amount of US\$ 4,300 of which US\$ 2,588 relates to the issue of new bonds maturing in 2031 and US\$ 1,712 relates to new bonds issued maturing in 2050.

The Company repaid several finance debts, in the amount of US\$ 28,884 notably: (i) prepayment of banking loans in the domestic and international market totaling US\$ 4,147 and (ii) US\$ 9,515 to repurchase of global bonds previously issued by the Company in the capital market, with net premium paid to bond holders amounting to US\$ 1,155; (iii) partial prepayment of its revolving credit lines, in the amount of US\$ 7.6 billion.

In addition, the Company carried out, in the international banking market, operations to improve its debt profile and to extend its maturity, not involving financial settlements, in the total amount of US\$ 2,490.

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### 34.3. Summarized information on current and non-current finance debt

Maturity in	2021	2022	2023	2024	2025	2026 onwards	Total (**)	Fair Value
Financing in U.S.Dollars (US\$)(*):	3,288	2,133	3,793	4,391	5,290	23,289	42,184	48,540
Floating rate debt	2,119	2,133	2,865	3,598	4,306	2,151	17,172	
Fixed rate debt	1,169	-	928	793	984	21,138	25,012	
Average interest rate	4.8%	4.9%	4.8%	5.1%	5.3%	6.6%	6.1%	
Financing in Brazilian Reais (R\$):	793	1,149	1,747	1,555	407	2,492	8,143	8,739
Floating rate debt	501	930	1,591	1,197	322	867	5,408	
Fixed rate debt	292	219	156	358	85	1,625	2,735	
Average interest rate	3.0%	3.8%	4.8%	4.5%	4.2%	4.3%	4.1%	
Financing in Euro (€):	58	-	352	15	532	737	1,694	1,993
Fixed rate debt	58	-	352	15	532	737	1,694	
Average interest rate	4.6%	-	4.6%	4.7%	4.7%	4.7%	4.7%	
Financing in Pound Sterling (£):	47	-	-	-	-	1,820	1,867	2,245
Fixed rate debt	47	-	-	-	-	1,820	1,867	
Average interest rate	6.2%	-	-	-	-	6.4%	6.3%	
<b>Total as of December 31, 2020</b>	<b>4,186</b>	<b>3,282</b>	<b>5,892</b>	<b>5,961</b>	<b>6,229</b>	<b>28,338</b>	<b>53,888</b>	<b>61,517</b>
Average interest rate	4.6%	4.8%	4.8%	5.1%	5.2%	6.4%	5.9%	
<b>Total as of December 31, 2019</b>	<b>4,469</b>	<b>3,971</b>	<b>4,689</b>	<b>8,036</b>	<b>8,537</b>	<b>33,558</b>	<b>63,260</b>	<b>72,801</b>
Average interest rate	5.1%	5.2%	5.3%	5.3%	5.3%	6.3%	5.9%	

(\*) Includes debt raised in Brazil (in Brazilian reais) indexed to the U.S. dollar.

(\*\*)The average maturity of outstanding debt as of December 31, 2020 is 11.71 years (10.79 years as of December 31, 2019).

The fair value of the Company's finance debt is mainly determined and categorized into a fair value hierarchy as follows:

Level 1- quoted prices in active markets for identical liabilities, when applicable, amounting to US\$ 33,236 of December 31, 2020 (US\$ 34,992 as of December 31, 2019); and

Level 2 – discounted cash flows based on discount rate determined by interpolating spot rates considering financing debts indexes proxies, taking into account their currencies and also Petrobras' credit risk, amounting to US\$ 28,281 as of December 31, 2020 (US\$ 37,809 as of December 31, 2019).

The sensitivity analysis for financial instruments subject to foreign exchange variation is set out in note 38.3.

A maturity schedule of the Company's finance debt (undiscounted), including face value and interest payments is set out as follows:

Maturity	2021	2022	2023	2024	2025	2026 and thereafter	12.31.2020	12.31.2019
Principal	3,522	3,395	5,807	6,230	6,347	29,831	55,132	65,284
Interest	2,436	2,346	2,188	2,037	1,827	28,119	38,953	43,859
<b>Total</b>	<b>5,958</b>	<b>5,741</b>	<b>7,995</b>	<b>8,267</b>	<b>8,174</b>	<b>57,950</b>	<b>94,085</b>	<b>109,143</b>

(\*) A maturity schedule of the lease arrangements (nominal amounts) is set out in note 35

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## 34.4. Lines of credit

Company	Financial institution	Date	Maturity	Amount		
				Available (Lines of Credit)	Used	Balance
<b>Abroad</b>						
PGT BV	Syndicate of banks	3/7/2018	2/7/2023	4,350	–	4,350
PGT BV	Syndicate of banks	3/27/2019	2/27/2024	3,250	–	3,250
PGT BV	BNP Paribas	12/22/2016	1/9/2021	350	336	14
PGT BV	The Export - Import Bank of	12/23/2019	12/27/2021	750	714	36
<b>Total</b>				<b>8,700</b>	<b>1,050</b>	<b>7,650</b>
<b>In Brazil</b>						
Petrobras	Banco do Brasil	3/23/2018	1/26/2023	385	–	385
Petrobras	Bradesco	6/1/2018	5/31/2023	385	385	–
Petrobras	Banco do Brasil	10/4/2018	9/5/2025	385	–	385
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	63	–	63
<b>Total</b>				<b>1,218</b>	<b>385</b>	<b>833</b>

On March 20, 2020, Petrobras draw down its Revolving Credit Lines (RCF), in the amount of US\$ 7.6 billion and US\$ 698, in order to protect itself from the economic effects arising from the COVID-19 pandemic and the decrease of oil prices.

In the third quarter of 2020, Petrobras repaid US\$ 7.6 billion relating to the RCF.

## 34.5. Covenants and Collateral

### 34.5.1. Covenants

The Company has covenants that were not in default at December 31, 2020 in its loan agreements and notes issued in the capital markets requiring, among other obligations i) the presentation of interim financial statements within 90 days of the end of each quarter (not reviewed by Independent Registered Public Accounting Firm) and audited financial statements within 120 days of the end of each fiscal year, with a grace period ranging from 30 to 60 days, depending on the agreement; ii) Negative Pledge / Permitted Liens clause; and iii) covenants with respect to debt level in some of its loan agreements with the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social - BNDES).

Additionally, there are other non-financial obligations that the Company has to comply with: i) clauses of compliance with the laws, rules and regulations applicable to the conduct of its business including (but not limited to) environmental laws; (ii) clauses in financing agreements that require both the borrower and the guarantor to conduct their business in compliance with anti-corruption laws and anti-money laundering laws and to institute and maintain policies necessary for such compliance; and (iii) clauses in financing agreements that restrict relations with entities or even countries sanctioned primarily by the United States (including, but not limited to, the Office of Foreign Assets Control (OFAC), Department of State and Department of Commerce), the European Union and United Nations.

### 34.5.2. Collateral

Most of the Company's debt is unsecured, but certain specific funding instruments to promote economic development are collateralized.

A Financing agreement with China Development Bank (CDB) maturing in 2026 is also collateralized based on future oil exports for specific buyers limited to 200 thousand barrels per day. This collateral may not exceed the amount of the related debt (US\$ 5,005 at December 31, 2020 and US\$ 5,006 at December 31, 2019).

The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities. Bonds issued by the Company in the capital market are unsecured.

The global notes issued by the Company in the capital market through its wholly-owned subsidiary Petrobras Global Finance B.V. – PGF are unsecured. However, Petrobras fully, unconditionally and irrevocably guarantees these notes, as set out in note 39.6.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***34.6. Accounting policy for financial liabilities**

Loans and finance debt are initially recognized at fair value less transaction costs that are directly attributable to its issue and subsequently measured at amortized cost using the effective interest method. When the contractual cash flows of a financial liability measured at amortized cost are renegotiated or modified and this change is not substantial, its gross carrying amount will reflect the discounted present value of its cash flows under the new terms using the original effective interest rate. The difference between the book value immediately prior to such modification and the new gross carrying amount is recognized as gain or loss in the statement of income. When such modification is substantial, the original liability is extinguished and a new liability is recognized, impacting the statement of income for the period.

**35. Lease liabilities**

The Company is the lessee in agreements primarily including oil and gas producing units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, lands and buildings.

Changes in the balance of lease liabilities are presented below:

	Balance at 12.31.2019	Remeasure ment / new contracts	Payment of principal and interest (*)	Interest expenses	Foreign exchange gains and losses	Cumulative translation adjustment	Transfers	Balance at 12.31.2020
In Brazil	5,504	647	(1,568)	293	812	(1,325)	(23)	4,340
Abroad	18,357	2,104	(4,248)	1,029	2,546	(2,484)	6	17,310
<b>Total</b>	<b>23,861</b>	<b>2,751</b>	<b>(5,816)</b>	<b>1,322</b>	<b>3,358</b>	<b>(3,809)</b>	<b>(17)</b>	<b>21,650</b>
Payments relating to liabilities held for sale			(64)					
<b>Net cash used in financing activities</b>			<b>(5,880)</b>					

A maturity schedule of the lease arrangements (nominal amounts) is set out as follows:

Nominal Future Payments	2021	2022	2023	2024	2025	2026 onwards	Total	Recoverable taxes
Without readjustment								
Vessels	2,864	2,186	1,173	693	353	1,162	8,431	247
Others	136	83	45	9	1	-	274	16
With readjustment - abroad (*)								
Vessels	726	386	116	116	116	253	1,713	-
Platforms	1,503	1,295	1,268	1,224	1,192	9,569	16,051	-
With readjustment - Brazil								
Vessels	337	203	150	110	75	53	928	83
Properties	101	87	90	84	84	936	1,382	14
Others	89	70	54	14	4	10	241	15
<b>TOTAL</b>	<b>5,756</b>	<b>4,310</b>	<b>2,896</b>	<b>2,250</b>	<b>1,825</b>	<b>11,983</b>	<b>29,020</b>	<b>375</b>

(\*) Contracts signed in the U.S. Dollars.

The following table presents information on leases by class of underlying assets:

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Present Value of Future Payments	Discount rate (% a.a.)	Average Period	Recoverable taxes	Closing Balance	Opening Balance
Without readjustment					
Vessels	3.9933	5.3 years	228	7,462	7,199
Others	2.5681	2.3 years	15	262	319
With readjustment - abroad (*)					
Platforms	6.1264	13.4 years	–	10,747	12,941
Vessels	4.6173	4.1 years	–	1,530	1,050
With readjustment - Brazil					
Vessels	6.7280	3.9 years	71	794	1,147
Properties	8.4268	20.8 years	11	643	859
Others	6.4310	3.3 years	13	212	346
<b>TOTAL</b>	<b>5.5398</b>	<b>10.4 years</b>	<b>338</b>	<b>21,650</b>	<b>23,861</b>

(\*) Incremental nominal rate on company debt calculated from the yield curve of bonds and credit risk of the Company, as well as terms.

Payments in certain lease agreements vary due to changes in facts or circumstances occurring after their inception other than the passage of time. Such payments are not included in the measurement of the lease obligations. Variable lease payments in the year ended December 31, 2020 amounted to US\$ 785, representing 13% in relation to fixed payments (US\$ 671 and 13% in the same period of 2019).

All extension options were included in the measurement of lease obligations.

In the year ended December 31, 2020, the Company recognized lease expenses in the amount of US\$ 118 relating to short-term leases (US\$ 674 in the same period of 2019).

At December 31, 2020, the balance of lease agreements for which the lease term has not commenced, as they relate to assets under construction or not yet available for use, is US\$ 67,408 (US\$ 50,130 at December 31, 2019).

The sensitivity analysis of financial instruments subject to exchange variation is presented in note 38.3.

### 35.1. Accounting policy

Lease liabilities, including those whose underlying assets are of low value, are measured at the present value of lease payments, which includes recoverable taxes, non-cancellable periods and options to extend a lease when they are reasonably certain. These payments are discounted at the Company's nominal incremental rate on loans, as the interest rates implicit in lease agreements with third parties usually cannot be readily determined.

Lease remeasurements reflect changes arising from contractual rates or indexes, as well as lease terms due to new expectations of lease extensions or terminations.

Unwinding of discount on the lease liability is classified as finance expense, while payments reduce their carrying amount. According to the Company's foreign exchange risk management, foreign exchange variations on lease liabilities denominated in U.S. dollars are designated as instruments to protect cash flow hedge relationships from highly probable future exports (see note 38.3).

In the E&P segment, some activities are conducted by joint operations where the company is the operator. In cases where all parties to the joint operation are primarily responsible for the lease payments, the Company recognizes the lease liability in proportion to its share. In addition, underlying assets arising from a specific contract in which the Company is solely responsible for the lease payments may be used in a joint operation. In such cases, the lease liabilities remain fully recognized and the partners are charged in proportion to their interests.

Payments associated with short-term leases (term of 12 months or less) are recognized as an expense over the term of the lease.

## **36. Equity**

### **36.1. Share capital (net of share issuance costs)**

As of December 31, 2020 and 2019, subscribed and fully paid share capital, net of issuance costs, was US\$ 107,101, represented by 7,442,454,142 common shares and 5,602,042,788 preferred shares, all of which are registered, book-entry shares with no par value.

Preferred shares have priority on returns of capital, do not grant any voting rights and are non-convertible into common shares.

#### **36.1.1. Accounting policy on share capital**

Share capital comprises common shares and preferred shares. Incremental costs directly attributable to the issue of new shares (share issuance costs) are presented (net of tax) in shareholders' equity as a deduction from the proceeds.

### **36.2. Capital reserves**

Capital reserve comprises treasury shares owned by Petrobras, in the amount of US\$ 2, at December 31, 2020.

### **36.3. Capital transactions**

#### **36.3.1. Incremental costs directly attributable to the issue of shares**

It includes any transaction costs directly attributable to the issue of new shares, net of taxes.

#### **36.3.2. Change in interest in subsidiaries**

It includes any excess of amounts paid/received over the carrying value of the interest acquired/disposed. Changes in interests in subsidiaries that do not result in loss of control of the subsidiary are equity transactions.

#### **36.3.3. Treasury shares**

Shares held in treasury in the amount of US\$ 2, represented by 222,760 common shares and 72,909 preferred shares.

### **36.4. Profit reserves**

#### **36.4.1. Legal reserve**

It represents 5% of the net income for the year, calculated pursuant to article 193 of the Brazilian Corporation Law.

#### **36.4.2. Statutory reserve**

Appropriated by applying 0.5% of the year-end share capital and is retained to fund technology research and development programs. The balance of this reserve may not exceed 5% of the share capital, pursuant to article 56 of the Company's bylaws.

#### **36.4.3. Tax incentives reserve**

Government grants are recognized in the statement of income and are appropriated from retained earnings to the tax incentive reserve in the shareholders' equity pursuant to article 195-A of Brazilian Corporation Law. This reserve may only be used to offset losses or increase share capital.

#### **36.4.4. Accounting policy on tax incentives reserve**

A government grant is recognized when there is reasonable assurance that the grant will be received and the Company will comply with the conditions attached to the grant.

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### 36.4.5. Profit retention reserve

It includes funds intended for capital expenditures, primarily in oil and gas exploration and development activities, as per the capital budget of the Company, pursuant to article 196 of the Brazilian Corporation Law.

### 36.5. Distributions to shareholders

Pursuant to Brazilian Corporation Law, the Company's shareholders are entitled to receive minimum mandatory dividends (and/or interest on capital) of 25% of the adjusted net income for the year in proportion to the number of common and preferred shares held by them.

To the extent the Company proposes dividend distributions, preferred shares have priority in dividend distribution, which is based on the highest of 3% of the preferred shares' net book value or 5% of the preferred share capital. Preferred shares participate under the same terms as common shares in capital increases resulting from the capitalization of profit reserves or retained earnings. However, this priority does not necessarily grant dividend distributions to the preferred shareholders in the event of loss for a year.

The payment of dividends may be made only to preferred shareholders if the priority dividends absorb all the adjusted net income for the year or reach an amount equal to or greater than the mandatory minimum dividend of 25%.

The Company's policy on distributions to shareholders defines that in the event of total debt lower than US\$ 60,000, the Company may distribute to its shareholders 60% of the difference between net cash flow from operating activities and acquisition of PP&E and intangibles assets (except for signature bonuses paid for exploration of crude oil and natural gas). In the event of total debt exceeding US\$ 60,000, the Company may distribute to its shareholders the minimum mandatory dividends provided for by relevant regulation and the Company's bylaws.

In addition, on October 27, 2020, the Company's Board of Directors approved the revision of the Shareholders Compensation Policy, in order to enable management to propose the payment of dividends according to the Company's cash generation, even when presenting losses in a fiscal year.

#### 36.5.1. Accounting policy on distributions to shareholders

Distributions to shareholders are made by means of dividends and interest on capital, determined in accordance with the limits defined in the Brazilian Corporation Law and in the Company's bylaws. Interest on capital is a deductible expense in the income tax calculation, while dividend is not deductible.

The dividends portion provided for in the bylaws or that represents the minimum mandatory dividends is recognized as a liability in the financial statements. Any excess must be maintained in shareholders' equity, as additional dividends proposed, until its approval on the Annual General Shareholders Meeting.

#### 36.5.2. Proposed dividends

Proposed distribution to shareholders sent by management for approval at the Annual General Shareholders Meeting, in the amount of US\$ 1,977, includes the minimum mandatory dividend to preferred shareholders (US\$ 849) and the additional dividends proposed (US\$ 1,128) to ordinary shareholders, arising from the remaining portion of the net income for the year and the profit retention reserve, considering cash generation in the year and the Company's preserved financial sustainability.

Distributions to shareholders for 2019 amounted to US\$ 2,687, most of it proposed as interest on capital, consistent with the minimum mandatory dividend of 25% of the adjusted income and withholding income tax rate of 15%.

#### 36.5.3. Dividends payable

As of December 31, 2020, the consolidated balance of dividends payable, within the consolidated statement of financial position, based on the 2020 earnings, is US\$ 858 (US\$ 1,558 as of December 31, 2019). Dividends payable attributable to shareholders of Petrobras amounts to US\$ 849 as of December 31, 2020 (US\$ 1,530 as of December 31, 2019), while dividends payable to non-controlling shareholders for US\$ 9 (US\$ 28 as of December 2019).

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Dividends payment will be defined in the Annual General Shareholders Meeting, bearing interest at Selic rate (Brazilian short-term interest rate) since December 31, 2020.

**36.6. Earnings per share**

	2020			2019			2018		
	Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	Total
<b>Net income attributable to shareholders of Petrobras</b>	<b>651</b>	<b>490</b>	<b>1,141</b>	<b>5,791</b>	<b>4,360</b>	<b>10,151</b>	<b>4,093</b>	<b>3,080</b>	<b>7,173</b>
Continuing operations	651	490	1,141	4,370	3,290	7,660	3,750	2,822	6,572
Discontinued operations	–	–	–	1,421	1,070	2,491	343	258	601
Weighted average number of outstanding shares	7,442,231,382	5,601,969,879	13,044,201,261	7,442,231,382	5,601,969,879	13,044,201,261	7,442,231,382	5,601,969,879	13,044,201,261
<b>Basic and diluted earnings per share - in U.S. dollars</b>	<b>0.09</b>	<b>0.09</b>	<b>0.09</b>	<b>0.78</b>	<b>0.78</b>	<b>0.78</b>	<b>0.55</b>	<b>0.55</b>	<b>0.55</b>
Continuing operations	0.09	0.09	0.09	0.59	0.59	0.59	0.50	0.50	0.50
Discontinued operations	–	–	–	0.19	0.19	0.19	0.05	0.05	0.05
<b>Basic and diluted earnings per ADS equivalent - in U.S. dollars (*)</b>	<b>0.18</b>	<b>0.18</b>	<b>0.18</b>	<b>1.56</b>	<b>1.56</b>	<b>1.56</b>	<b>1.10</b>	<b>1.10</b>	<b>1.10</b>
Continuing operations	0.18	0.18	0.18	1.17	1.17	1.17	1.00	1.00	1.00
Discontinued operations	–	–	–	0.39	0.39	0.39	0.10	0.10	0.10

(\*) Petrobras' ADSs are equivalent to two shares.

Basic earnings per share are calculated by dividing the net income (loss) attributable to shareholders of Petrobras by the weighted average number of outstanding shares during the period.

Diluted earnings (losses) per share are calculated by adjusting the net income (loss) attributable to shareholders of Petrobras and the weighted average number of outstanding shares during the period taking into account the effects of all dilutive potential shares (equity instrument or contractual arrangements that are convertible into shares).

Basic and diluted earnings (losses) are identical as the Company has no potential shares in issue.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***37. Fair value of financial assets and liabilities**

	Level I	Level II	Level III	Total fair value recorded
<b>Assets</b>				
Marketable securities	652	-	-	652
Foreign currency derivatives	-	67	-	67
Interest rate derivatives	-	48	-	48
<b>Balance at December 31, 2020</b>	652	67	-	719
<b>Balance at December 31, 2019</b>	882	58	-	940
<b>Liabilities</b>				
Foreign currency derivatives	-	(269)	-	(269)
Commodity derivatives	(10)	-	-	(10)
<b>Balance at December 31, 2020</b>	(10)	(269)	-	(279)
<b>Balance at December 31, 2019</b>	(28)	(110)	-	(138)

The estimated fair value for the Company's long-term debt, computed based on the prevailing market rates, is set out in note 34.

Certain receivables are classified as fair value through profit or loss, as presented in note 14.

The fair values of cash and cash equivalents, short-term debt and other financial assets and liabilities are equivalent or do not differ significantly from their carrying amounts.

**NOTES TO THE FINANCIAL STATEMENTS**

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*(Expressed in millions of US Dollars, unless otherwise indicated)***38. Risk management**

The Company is exposed to a variety of risks arising from its operations, including price risk (related to crude oil and oil products prices), foreign exchange rates risk, interest rates risk, credit risk and liquidity risk. Corporate risk management is part of the Company's commitment to act ethically and comply with the legal and regulatory requirements of the countries where it operates. To manage market and financial risks the Company prefers structuring measures through adequate capital and leverage management. While managing risks, the Company considers its corporate governance and controls, technical departments and statutory committees monitoring, under the guidance of the Board of Executive Officers and the Board of Directors. The Company takes account of risks in its business decisions and manages any such risk in an integrated manner in order to enjoy the benefits of diversification.

**38.1. Derivative financial instruments**

A summary of the positions of the derivative financial instruments held by the Company and recognized in other current assets and liabilities as of December 31, 2020, as well as the amounts recognized in the statement of income and other comprehensive income and the guarantees given is set out as follows:

	Statement of Financial Position				
	Notional value		Fair value		Maturity
	12.31.2020	12.31.2019	Asset Position (Liability)		
	12.31.2020	12.31.2019	12.31.2020	12.31.2019	
<b>Derivatives not designated for hedge accounting</b>					
<b>Future contracts - total (*)</b>	(240)	(10,383)	(10)	(28)	
Long position/Crude oil and oil products	3,927	9,865	-	-	2021
Short position/Crude oil and oil products	(4,167)	(20,248)	-	-	2021
<b>Forward contracts</b>					
Long position/Foreign currency forwards (BRL/USD) (**)	-	US\$ 273	-	-	-
Long position/Foreign currency forwards (EUR/USD) (**)	-	EUR 2.245	-	(45)	-
Long position/Foreign currency forwards (GPB/USD) (**)	GBP 354	GBP 388	23	11	2021
Short position/Foreign currency forwards (GPB/USD) (**)	-	GBP 224	-	(14)	-
<b>Swap</b>					
Foreign currency / Cross-currency Swap (**)	GBP 615	GBP 700	44	32	2026
Foreign currency / Cross-currency Swap (**)	GBP 600	GBP 600	(26)	(50)	2034
Swap - IPCA	R\$ 3008	R\$ 3008	47	6	2029/2034
Foreign currency / Cross-currency Swap (**)	US\$ 729	US\$ 729	(244)	11	2024/2029
<b>Total recognized in the Statement of Financial Position</b>			<b>(166)</b>	<b>(77)</b>	

(\*) Notional value in thousands of bbl.

(\*\*) Amounts in US\$, GBP and EUR are presented in million.

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	Gains/ (losses) recognized in the statement of income		
	2020	2019	2018
<b>Commodity derivatives</b>			
Crude oil - 38.2 (a) (b)	(502)	(216)	(401)
Gasoline - 38.2 (b)	-	11	(34)
Diesel - 38.2 (b)	-	(12)	-
Other commodity derivative transactions - 38.2 (c)	194	(153)	19
<b>Recognized in Other Income and Expenses</b>	<b>(308)</b>	<b>(370)</b>	<b>(416)</b>
<b>Currency derivatives</b>			
Swap Pounds Sterling x Dollar - 38.3 (b)	11	(18)	(265)
NDF – Euro x Dollar - 38.3 (b)	(23)	(153)	(129)
NDF – Pounds Sterling x Dollar - 38.3 (b)	20	(8)	(12)
Swap CDI x Dollar - 38.3 (b)	(284)	7	-
Others	(2)	6	36
	<b>(278)</b>	<b>(166)</b>	<b>(370)</b>
<b>Interest rate derivatives</b>			
Swap - CDI X IPCA	(36)	6	-
	<b>(36)</b>	<b>6</b>	<b>-</b>
Cash flow hedge on exports (*)	<b>(4,720)</b>	<b>(3,136)</b>	<b>(3,315)</b>
<b>Recognized in Net finance income (expense)</b>	<b>(5,034)</b>	<b>(3,296)</b>	<b>(3,685)</b>
<b>Total</b>	<b>(5,342)</b>	<b>(3,666)</b>	<b>(4,101)</b>

(\*) As presented in note 38.3

	Gains/ (losses) recognized in other comprehensive income		
	2020	2019	2018
Cash flow hedge on exports (*)	(17,542)	(5,060)	(5,635)

(\*) As presented in note 38.3

	Guarantees given as collateral	
	12.31.2020	12.31.2019
Commodity derivatives	13	57
Currency derivatives	78	230
<b>Total</b>	<b>91</b>	<b>287</b>

A sensitivity analysis of the derivative financial instruments for the different types of market risks as of December 31, 2020 is set out as follows:

Financial Instruments	Risk	Probable Scenario (*)		
		Reasonably possible scenario (*)	Remote Scenario (*)	
<b>Derivatives not designated for hedge accounting</b>				
Future and forward contracts	Crude oil and oil products - price changes	-	(27)	(55)
		<b>-</b>	<b>(27)</b>	<b>(55)</b>
<b>Net effect</b>				

(\*) The probable scenario was computed based on the fair value of oil and oil products prices at December 31, 2020. Reasonably possible and remote scenarios consider 25% and 50% deterioration in the associated risk variables, respectively.

## 38.2. Risk management of crude oil and oil products prices

The Company is usually exposed to commodity price cycles, although it may use derivative instruments to hedge exposures related to prices of products purchased and sold to fulfill operational needs and in specific circumstances depending on business environment analysis and assessment of whether the targets of the Strategic Plan are being met.

## NOTES TO THE FINANCIAL STATEMENTS

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*(Expressed in millions of US Dollars, unless otherwise indicated)*

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### a) Crude oil

In March 2020, in order to preserve the Company's liquidity, Petrobras approved a hedge strategy for exported oil already shipped but not priced mainly due to the high volatility of the current context, both due to the effects of the oil price drop and the effects of the COVID-19 pandemic on the global oil consumption.

As a result of this strategy, from April 2020, transactions using forward and futures contracts were carried out. Forward transactions do not require initial disbursement, whereas future transactions require margin deposits, depending on the volume contracted.

### b) Crude oil, diesel and gasoline – 2019

Crude oil – results relate to put options referenced in the average Brent oil prices, with strike price of US\$ 60/barrel to protect production. However, in the third quarter of 2019, based on the significant reduction in cash flow uncertainties concerning the Business and Management Plan for 2019, Petrobras sold the put options.

Diesel and gasoline – results relate to non-deliverable forwards (NDF) derivatives contracted in 2018 as a hedge strategy for gasoline and diesel prices and foreign exchange rates, aiming at giving additional flexibility to the pricing policy at that time.

### c) Other commodity derivative transactions

Petrobras, by use of its assets, positions and market knowledge from its operations in Brazil and abroad, occasionally seeks to optimize some of its commercial operations in the international market, with the use of commodity derivatives to manage price risk.

## 38.3. Foreign exchange risk management

The Company's Risk Management Policy provides for, as an assumption, an integrated risk management that extends to the whole corporation, pursuing the benefit from the diversification of its businesses.

By managing its foreign exchange risk, the Company takes into account the cash flows derived from its operations as a whole. This concept is especially applicable to the risk relating to the exposure of the Brazilian Real against the U.S. dollar, in which future cash flows in U.S. dollar, as well as cash flows in Brazilian Real affected by the fluctuation between both currencies, such as cash flows derived from diesel and gasoline sales in the domestic market, are assessed in an integrated manner.

Accordingly, the financial risk management mainly involves structured actions encompassing the business of the Company.

Changes in the Real/U.S. dollar spot rate, as well as foreign exchange variation of the Real against other foreign currencies, may affect net income and the statement of financial position due to the exposures in foreign currencies, such as high probable future transactions, monetary items and firm commitments.

The Company seeks to mitigate the effect of potential variations in the Real/U.S. dollar spot rates mainly raising funds denominated in US dollars, aiming at reducing the net exposure between obligations and receipts in this currency, thus representing a form of structural protection that takes into account criteria of liquidity and cost competitiveness.

Foreign exchange variation on future exports denominated in U.S. Dollar in a given period are efficiently hedged by the US dollar debt portfolio taking into account changes in such portfolio over time.

The foreign exchange risk management strategy may involve the use of derivative financial instruments to hedge certain liabilities, mitigating foreign exchange rate risk exposure, especially when the Company is exposed to a foreign currency in which no cash inflows are expected, for example, the Pound Sterling.

In the short-term, the foreign exchange risk is managed by applying resources in cash or cash equivalent denominated in Brazilian Real, U.S. Dollar or in another currency.

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### a) Cash Flow Hedge involving the Company's future exports

The carrying amounts, the fair value as of December 31, 2020, and a schedule of expected reclassifications to the statement of income of cumulative losses recognized in other comprehensive income (shareholders' equity) based on a US\$ 1.00 / R\$ 5.1967 exchange rate are set out below:

Hedging Instrument	Hedged Transactions	Nature of the Risk	Maturity Date	Present value of hedging instrument notional value at 12.31.2020	
				(US\$ million)	(R\$ million)
Foreign exchange gains and losses on proportion of non-derivative financial instruments cash flows	Foreign exchange gains and losses on a portion of highly probable future monthly exports revenues	Foreign Currency – Real vs U.S. Dollar Spot Rate	January 2021 to December 2030	61,502	319,608
<b>Changes in the present value of hedging instrument notional value</b>				<b>US\$</b>	<b>R\$ million</b>
Amounts designated as of January 1, 2020				87,651	353,295
Additional hedging relationships designated, designations revoked and hedging instruments re-designated				12,128	59,145
Exports affecting the statement of income				(13,432)	(67,343)
Principal repayments / amortization				(24,845)	(124,955)
Foreign exchange variation				-	99,466
<b>Amounts designated as of December 31, 2020</b>				<b>61,502</b>	<b>319,608</b>
<b>Nominal value of hedging instrument (finance debt and lease liability) at December 31, 2020</b>				<b>69,314</b>	<b>360,205</b>

In 2020, highly probable future exports were impacted by the effects of the oil price war and the COVID-19 pandemic.

Thus, a portion of exports designated for hedge relationships are no longer considered highly probable, but are still expected to occur, and consequently the hedge relationships were revoked at March 31, 2020, in the amount of US\$ 35,774. The foreign exchange variation accounted for these operations within other comprehensive income up to the end of the first quarter remains in shareholders' equity, and will be reclassified to the statement of income when exports occur.

According to the 2021-2025 Strategic Plan, there is an increase in expected exports compared to the expected in the first quarter and consequently in highly probable future exports, but not in an amount equal to or greater than the finance debt and lease liabilities subject to designation as hedge instruments. As a result, the relevant increase in Dollar/Real exposure observed during 2020 remains at December 31, 2020, as presented in item (c) below.

In the year ended December 31, 2020, the Company recognized a US\$ 1 gain within foreign exchange gains (losses) due to ineffectiveness (a US\$ 9 gain in 2019).

In addition, a portion of exports designated for hedge relationships, from April to December 2020 and from August to December 2021, were no longer expected to occur, and the corresponding foreign exchange variation were recycled from shareholder's equity to the statement of income in 2020, in the amount of US\$ 572 (of which US\$ 510 was redesignated in the first quarter of 2020).

The average ratio of future exports for which cash flow hedge accounting was designated to the highly probable future exports is 100%.

A roll-forward schedule of cumulative foreign exchange losses recognized in other comprehensive income as of December 31, 2020 is set out below:

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	Exchange rate variation	Tax effect	Total
Balance at January 1, 2019	(20,143)	6,851	(13,292)
Recognized in Other comprehensive income	(3,510)	1,192	(2,318)
Reclassified to the statement of income - occurred exports	3,136	(1,066)	2,070
<b>Balance at December 31, 2019</b>	<b>(20,517)</b>	<b>6,977</b>	<b>(13,540)</b>
Recognized in Other comprehensive income	(21,460)	7,296	(14,164)
Reclassified to the statement of income - occurred exports	4,172	(1,419)	2,753
Reclassified to the statement of income - exports no longer expected to occur	548	(187)	361
<b>Balance at December 31, 2020</b>	<b>(37,257)</b>	<b>12,667</b>	<b>(24,590)</b>

Additional hedging relationships may be revoked or additional reclassification adjustments from equity to the statement of income may occur as a result of changes in forecasted export prices and export volumes following a revision of the Company's strategic plan. Based on a sensitivity analysis considering a US\$ 10/barrel decrease in Brent prices stress scenario, when compared to the Brent price projections in our Strategic Plan 2021-2025, would not indicate a reclassification adjustment from equity to the statement of income.

A schedule of expected reclassification of cumulative foreign exchange losses recognized in other comprehensive income to the statement of income as of December 31, 2020 is set out below:

	2021	2022	2023	2024	2025	2026	2027	2028 to 2030	Total
Expected realization	(6,895)	(7,323)	(6,132)	(4,647)	(3,163)	(2,731)	(2,832)	(3,534)	(37,257)

**a.1) Accounting policy**

At inception of the hedge relationship, the Company documents its objective and strategy, including identification of the hedging instrument, the hedged item, the nature of the hedged risk and evaluation of hedge effectiveness requirements.

Considering the natural hedge and the risk management strategy, the Company designates hedging relationships to account for the effects of the existing hedge between a foreign exchange gain or loss from proportions of its long-term debt obligations (denominated in U.S. dollars) and foreign exchange gain or loss of its highly probable U.S. dollar denominated future export revenues, so that gains or losses associated with the hedged transaction (the highly probable future exports) and the hedging instrument (debt obligations) are recognized in the statement of income in the same periods.

Foreign exchange gains and losses on proportions of debt obligations and lease liability (non-derivative financial instruments) have been designated as hedging instruments.

The highly probable future exports for each month are hedged by a proportion of the debt obligations with an equal US dollar nominal amount. Only a portion of the Company's forecast exports are considered highly probable.

The Company's future exports are exposed to the risk of variation in the Brazilian Real/U.S. dollar spot rate, which is offset by the converse exposure to the same type of risk with respect to its debt denominated in US dollar.

The hedge relationships are assessed on a monthly basis and they may cease and may be re-designated in order to achieve the risk management strategy.

Foreign exchange gains and losses relating to the effective portion of such hedges are recognized in other comprehensive income and reclassified to the statement of income within finance income (expense) in the periods when the hedged item affects the statement of income. The gains or losses relating to the ineffective portion are immediately recognized in finance income (expense).

Whenever a portion of future exports for a certain period, for which their foreign exchange gains and losses hedging relationship has been designated is no longer highly probable, the Company revokes the designation and the cumulative foreign exchange gains or losses that have been recognized in other comprehensive income remain separately in equity until the forecast exports occur.

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If future exports for which foreign exchange gains and losses hedging relationship has been designated is no longer expected to occur, any related cumulative foreign exchange gains or losses that have been recognized in other comprehensive income from the date the hedging relationship was designated to the date the Company revoked the designation is immediately recycled from equity to the statement of income.

In addition, when a financial instrument designated as a hedging instrument expires or settles, the Company may replace it with another financial instrument in a manner in which the hedge relationship continues to occur. Likewise, whenever a hedged transaction effectively occurs, its financial instrument previously designated as a hedging instrument may be designated for a new hedge relationship.

The gains or losses relating to the ineffective portion are immediately recognized in finance income (expense). Ineffectiveness may occur as hedged items and hedge instruments have different maturity dates and due to discount rate used to determine their present value.

### **b) Information on ongoing contracts**

#### **Cross currency swap – Pounds Sterling x Dollar**

In 2017, the Company, through its wholly owned subsidiary Petrobras Global Trading B.V. (PGT), entered into cross currency swaps maturing in 2026 and 2034, with notional amounts of £ 700 million and £ 600 million, respectively, in order to hedge its Pounds/U.S. Dollar exposure arising from bonds issued amounting to £ 1,300.

#### **Non Deliverable Forward (NDF) – Euro x Dollar and Pounds Sterling x Dollar**

In 2018, the Company, also through PGT, entered into non deliverable forwards, in other to reduce its euro x dollar and pounds x dollar exposures raised by bonds issued.

As of December 31, 2020, net notional amount of pounds x dollars derivative changed to £ 354 million, while the position in Euros was terminated.

#### **Swap contracts – National consumer price index (IPCA) x Brazilian interbank offering rate (CDI) and CDI x Dollar**

In September 2019, Petrobras contracted a cross currency swap aiming to protect against exposure arising from the 7th issuance of debentures, settled on October 9, 2019, maturing in September 2029 and September 2034, and for CDI x U.S. Dollar operations, maturing in September 2024 and September 2029.

Changes in future interest rate curves (CDI) may have an impact on the Company's results, due to the market value of these swap contracts. A sensitivity analysis on CDI with a constant increase (parallel shock) of 100 basis points, all other variables remaining constant, would result in a US\$ 71 loss, while a constant reduction (parallel shock) of 100 basis points, would result in a US\$ 70 gain.

### **c) Sensitivity analysis for foreign exchange risk on financial instruments**

A sensitivity analysis is set out below, showing the probable scenario for foreign exchange risk on financial instruments, computed based on external data along with stressed scenarios (a 25% and a 50% change in the foreign exchange rates), except for assets and liabilities of foreign subsidiaries, when transacted in a currency equivalent to their respective functional currencies.

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Financial Instruments	Exposure at 12.31.2020	Risk	Probable Scenario (*)	Reasonably possible scenario	Remote Scenario
Assets	4,639		(42)	1,160	2,320
Liabilities	(107,346)	Dollar/Real	965	(26,836)	(53,673)
Exchange rate - Cross currency swap	(579)		5	(145)	(289)
Cash flow hedge on exports	61,502		(553)	15,376	30,751
	(41,784)		375	(10,445)	(20,891)
Assets	4	Euro/Real	-	1	2
Liabilities	(48)		2	(12)	(24)
	(44)		2	(11)	(22)
Assets	1,705	Euro/Dollar	(10)	426	852
Liabilities	(3,406)		20	(852)	(1,703)
	(1,701)		10	(426)	(851)
Assets	5	Pound/Real	-	1	2
Liabilities	(23)		1	(6)	(12)
	(18)		1	(5)	(10)
Assets	1,883	Pound/Dollar	(22)	471	942
Liabilities	(3,742)		44	(935)	(1,871)
Derivative - cross currency swap	1,660		(20)	415	830
Non Deliverable Forward (NDF)	483		(6)	121	242
	284		(4)	72	143
<b>Total at December 31, 2020</b>	<b>(43,263)</b>		<b>384</b>	<b>(10,815)</b>	<b>(21,631)</b>
<b>Total at December 31, 2019</b>	<b>950</b>		<b>16</b>	<b>285</b>	<b>570</b>

(\*) At December 31, 2020, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar - a 0.9% appreciation of the Real; Euro x U.S. Dollar: a 0.6% depreciation of the Euro; Pound Sterling x U.S. Dollar: a 1.19% depreciation of the Pound Sterling; Real x Euro: a 5% appreciation of the Real; and Real x Pound Sterling - a 4.6% appreciation of the Real. Source: Focus and Thomson Reuters.

## 38.4. Interest rate risk management

The Company considers that interest rate risk does not create a significant exposure and therefore, preferably does not use derivative financial instruments to manage interest rate risk, except for specific situations faced by certain subsidiaries of Petrobras.

Risk	Probable Scenario (*)	Reasonably possible scenario	Remote Scenario
LIBOR 1M	10	12	14
LIBOR 3M	13	15	17
LIBOR 6M	414	463	512
CDI	83	104	125
TJLP	84	105	126
IPCA	77	96	115
	<b>681</b>	<b>795</b>	<b>909</b>

(\*) The probable scenario was calculated considering the quotations of currencies and floating rates to which the debts are indexed.

## 38.5. Credit risk

Credit risk management in Petrobras aims to mitigate risk of not collecting receivables, financial deposits or collateral from third parties or financial institutions through efficient credit analysis, granting and management based on quantitative and qualitative parameters that are appropriate for each market segment in which the Company operates.

The commercial credit portfolio is broad and diversified and comprises clients from the domestic and foreign markets. Credit granted to financial institutions is related to collaterals received, cash surplus invested and derivative financial instruments. It is spread among "investment grade" international banks rated by international rating agencies and Brazilian banks with low credit risk.

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### 38.5.1. Credit quality of financial assets

#### a) Trade and other receivables

Most of Petrobras's clients do not have a risk rating granted by rating agencies. Thus, for the definition and monitoring of credit limits, management evaluates the customer's field of activity, commercial relationship, financial relationship with Petrobras and its financial statements, among other aspects.

#### b) Other financial assets

Credit quality of cash and cash equivalents, as well as marketable securities is based on external credit ratings provided by Standard & Poor's, Moody's and Fitch. The credit quality of those financial assets, that are neither past due nor considered to be credit impaired, are set out below:

	Cash and cash equivalents		Marketable securities	
	12.31.2020	12.31.2019	12.31.2020	12.31.2019
AA	1,995	1,053	-	-
A	2,363	1,173	-	-
BBB	168	41	-	-
BB	4,154	3,591	-	838
AAA.br	673	80	652	33
AA.br	1,960	1,224	43	48
Other ratings	398	210	8	27
	11,711	7,372	703	946

### 38.6. Liquidity risk management

The possibility of a shortage of cash or other financial assets in order to settle the Company's obligations on the agreed dates and is managed by the Company based on policies such as:

- centralization of cash management, optimization of the level of cash and cash equivalents held and reduction of working capital;
- maintenance of an adequate cash balance to ensure that cash need for investments and short-term obligations is met even in adverse market conditions;
- increase in the average debt maturity, increase in funding sources from domestic and international markets (new markets and financial products); and
- funds under the partnership and divestment program.

Following its liability management strategy, the Company regularly evaluates market conditions and may enter into transactions to repurchase its own securities or those of its affiliates, through a variety of means, including tender offers, make whole exercises and open market repurchases, in order to improve its debt repayment profile and cost of debt.

#### 38.6.1. Measures to protect the Company's liquidity

As a result of the sharp reduction in prices and demand for oil and oil products caused by the effects of the COVID-19 pandemic in the economy around the world, the Company adopted a set of measures to reduce disbursements and preserve cash generation, in order to reinforce its financial strength and the resilience of its businesses.

These measures are described in note 6.

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### 38.7. Insurance

The Company's insurance strategy involves acquiring insurance to cover risks that may produce material impacts and to cover risks that are subject to compulsory insurance coverage (pursuant to legal or contractual requirements). The remaining risks are self-insured and Petrobras intentionally assumes the entire risk by abstaining from contracting insurance. The Company assumes a significant portion of its risk, by entering into insurance policies that have deductible clauses up to the equivalent to US\$180.

Additionally, the Company has indemnify clauses in its bylaws, as set out in note 39.

The main information concerning the insurance coverage outstanding at December 31, 2020 is set out below:

Assets	Types of coverage	Amount insured
Facilities, equipment inventory and products inventory	Fire, operational risks and engineering risks	124,493
Tankers and auxiliary vessels	Hulls	3,341
Fixed platforms, floating production systems and offshore drilling units	Oil risks	48,786
<b>Total</b>		<b>176,620</b>

Petrobras does not have loss of earnings insurance or insurance related to automobiles and pipeline networks in Brazil.

### 39. Related-party transactions

The Company has a related-party transactions policy, which is annually revised and approved by the Board of Directors in accordance with the Company's by-laws.

In order to ensure the goals of the Company are achieved and to align them with transparency of processes and corporate governance best practices, this policy guides Petrobras while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, based on the following assumptions and provisions:

- Prioritization of the Company's interests regardless of the counterparty;
- Arm's length basis;
- Compliance with market conditions, especially concerning terms, prices and guarantees or with adequate compensatory payment;
- Accurate and timely disclosure in accordance with applicable authorities.

The Audit Committee must approve in advance transactions between the Company and its associates, entities controlled by key management personnel or by their close family members, the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, taking into account the materiality established by this policy. The Audit Committee reports monthly to the Board of Directors.

Transactions with the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, which are under the scope of Board of Directors approval, must be preceded by the Audit Committee and Minority Shareholders Committee assessment and must have prior approval of, at least, 2/3 of the board members.

The related-party transactions policy also aims to ensure an adequate and diligent decision-making process for the Company's key management.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***39.1. Transactions with joint ventures, associates, government entities and pension plans**

The Company has engaged, and expects to continue to engage, in the ordinary course of business in numerous transactions with joint ventures, associates, pension plans, as well as with the Company's controlling shareholder, the Brazilian Federal Government, which include transactions with banks and other entities under its control, such as financing and banking, asset management and other transactions.

The balances of significant transactions are set out in the following table:

	12.31.2020		12.31.2019	
	Assets	Liabilities	Assets	Liabilities
<b>Joint ventures and associates</b>				
Petrobras Distribuidora (BR)	196	39	224	47
Natural Gas Transportation Companies	74	191	150	717
State-controlled gas distributors (joint ventures)	225	68	338	104
Petrochemical companies (associates)	17	9	47	29
Other associates and joint ventures	152	120	35	203
<b>Subtotal</b>	<b>664</b>	<b>427</b>	<b>794</b>	<b>1,100</b>
<b>Brazilian government – Parent and its controlled entities</b>				
Government bonds	1,632	-	1,580	-
Banks controlled by the Brazilian Government	7,676	3,707	8,584	4,904
Receivables from the Electricity sector (note 14.1)	205	-	334	-
Petroleum and alcohol account - receivables from the Brazilian Government (note 14.1)	482	-	304	-
Brazilian Federal Government - dividends	2	-	-	417
Empresa Brasileira de Administração de Petróleo e Gás Natural – Pré-Sal Petróleo S.A. – PPSA	-	-	-	20
Others	38	47	45	43
<b>Subtotal</b>	<b>10,035</b>	<b>3,754</b>	<b>10,847</b>	<b>5,384</b>
Pension plans	52	65	60	110
<b>Total</b>	<b>10,751</b>	<b>4,246</b>	<b>11,701</b>	<b>6,594</b>
Current	2,663	1,225	2,849	1,904
Non-Current	8,088	3,021	8,852	4,690
<b>Total</b>	<b>10,751</b>	<b>4,246</b>	<b>11,701</b>	<b>6,594</b>

The income/expenses of significant transactions are set out in the following table:

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	2020	2019	2018
<b>Joint ventures and associates</b>			
Petrobras Distribuidora (BR)	11,038	7,242	–
Natural Gas Transportation Companies	(1,478)	(1,858)	(932)
State-controlled gas distributors (joint ventures)	1,723	2,812	2,306
Petrochemical companies (associates)	2,769	2,926	3,762
Other associates and joint ventures	265	208	36
<b>Subtotal</b>	<b>14,317</b>	<b>11,330</b>	<b>5,172</b>
<b>Brazilian government – Parent and its controlled entities</b>			
Government bonds	41	107	109
Banks controlled by the Brazilian Government	(456)	(652)	(902)
Receivables from the Electricity sector (note 14.1)	72	300	1,713
Petroleum and alcohol account - receivables from the Brazilian Government (note 14.1)	235	8	92
Diesel Price Subsidy Program	–	–	1,559
Brazilian Federal Government - dividends	(4)	(4)	3
Empresa Brasileira de Administração de Petróleo e Gás Natural – Pré-Sal Petróleo S.A. – PPSA	(135)	(110)	(461)
Others	(15)	(130)	144
<b>Subtotal</b>	<b>(262)</b>	<b>(482)</b>	<b>2,257</b>
<b>Pension plans</b>	<b>(177)</b>	<b>–</b>	<b>–</b>
<b>Total</b>	<b>13,878</b>	<b>10,848</b>	<b>7,429</b>
Revenues, mainly sales revenues	16,202	13,748	8,733
Purchases and services	(2,074)	(2,591)	(2,239)
Income (expenses)	(93)	–	–
Foreign exchange and inflation indexation charges, net	(102)	(395)	(316)
Finance income (expenses), net	(55)	87	1,251
<b>Total</b>	<b>13,878</b>	<b>10,848</b>	<b>7,429</b>

(\*) It includes TAG results until July 2020, when the Company entered into an agreement for the sale of its remaining interest (note 24.2)

The liability related to pension plans of the Company's employees and managed by the Petros Foundation, including debt instruments, is presented in note 19.

### 39.2. Petroleum and alcohol account - receivables from the Brazilian Government

Pursuant to Provisional Measure 2,181 of August 24, 2001, the Brazilian Federal Government may settle the balance of receivables related to the Petroleum and Alcohol accounts by using National Treasury Notes in an amount equal to the outstanding balance, or allow the Company to offset the outstanding balance against amounts payable to the Federal Government, including taxes payable, or both.

Following several negotiation attempts at the administrative level, the Company filed a lawsuit in July 2011 to collect the receivables.

On November 30, 2020, since there was no possibility of impugment because the decision was final, the precatory was sent to the Federal Regional Court of the 2nd Region. The amount of US\$ 476 (R\$ 2,473 million), will be indexed up to the date of the effective payment. The Company expects to receive the amount in the first half of 2022.

Accordingly, the Company recorded the amount of US\$ 235 within net finance income (expense), including inflation indexation and interests, of which US\$ 228 arises from the update relating to the difference between the Reference Rate and the IPCA-E of the outstanding balance.

As of December 31, 2020, the balance of receivables related to the Petroleum and Alcohol accounts is US\$ 482 (US\$ 304 as of December 31, 2019), recorded within non-current assets. Thus, no amounts remain classified as a contingent asset as of December 31, 2020.

### 39.3. Compensation of key management personnel

The criteria for compensation of employees and officers are established based on the relevant labor legislation and the Company's Positions, Salaries and Benefits Plan (Plano de Cargos e Salários e de Benefícios e Vantagens).

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The compensation of employees (including those occupying managerial positions) and officers in December 2020 and December 2019 were:

Compensation of employees, excluding officers (amounts in U.S. dollars)	2020	2019
Lowest compensation	708	928
Average compensation	3,814	4,985
Highest compensation	19,939	26,602
Compensation of highest paid Petrobras officer	20,700	28,038

The total compensation of Executive Officers and Board Members of Petrobras is set out as follows:

	2020			2019		
	Officers	Board members	Total	Officers	Board members	Total
Wages and short-term benefits	2.0	0.1	2.1	2.9	0.3	3.2
Social security and other employee-related taxes	0.5	-	0.5	1.0	-	1.0
Post-employment benefits (pension plan)	0.1	-	0.1	0.4	-	0.4
Variable compensation	-	-	-	2.8	-	2.8
Benefits due to termination of tenure	0.1	-	0.1	0.4	-	0.4
<b>Total compensation recognized in the statement of income</b>	<b>2.7</b>	<b>0.1</b>	<b>2.8</b>	<b>7.5</b>	<b>0.3</b>	<b>7.8</b>
<b>Total compensation paid</b>	<b>2.7</b>	<b>-</b>	<b>2.7</b>	<b>6.0</b>	<b>-</b>	<b>6.0</b>
Average number of members in the period (*)	9.00	9.44	18.44	7.67	9.75	17.42
Average number of paid members in the period (**)	9.00	4.33	13.33	7.67	5.00	12.67

(\*) Monthly average number of members.

(\*\*) Monthly average number of paid members.

For 2020 December 31, 2020, expenses related to compensation of the board members and executive officers of Petrobras amounted to US\$ 14 (US\$ 21 for the same period of 2019).

On July 22, 2020, the Company's Annual Shareholders' Meeting approved a change in the overall compensation for executive officers and board members, setting the total compensation threshold at US\$ 8 (R\$ 43,3 million) from April 2020 to March 2021.

The compensation of the Advisory Committees to the Board of Directors is separate from the fixed compensation set for the Board Members and, therefore, has not been classified under compensation of Petrobras' key management personnel.

In accordance with Brazilian regulations applicable to companies controlled by the Brazilian Federal Government, Board members who are also members of the Audit Committee or Audit Committee of Petrobras and its subsidiaries are only compensated with respect to their Audit Committee duties. The total compensation concerning these members was US\$ 430 thousand for the year ended December 31, 2020 (US\$ 527 thousand with tax and social security costs). For the same period of 2019, the total compensation concerning these members was US\$ 430 thousand (US\$ 506 thousand with tax and social security costs).

The amount of compensation to be paid varies according to the percentage of achievement of the financial and operational targets. The program foresees compensations being disbursed through 5 years.

On December 31, 2020, the company provisioned US\$ 2 (R\$ 13 million) related to the Performance Award Program – (PPP) 2020.

### Exemption from damage (indemnity)

The company's bylaws establishes the obligation to indemnify and keep the officers without losses, members with statutory functions and other employees and agents that legally act through officers' delegation, so as to cope with certain expenses related to arbitration, judicial or administrative processes that involve acts performed in the exercise of their duties or powers, since the date of your possession or the since the beginning of the contractual relation with the Company.

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The first period of the agreement coverage began on December 18, 2018 and continues until the occurrence of the following events, whichever comes last: (i) the end of the fifth (5th) year following the date on which the beneficiary leave, for any reason, to exercise the mandate, function or position; (ii) the course of the time required in transit of any Process in which the Beneficiary is partly due to the practice of Regular Management Act; or (iii) the course of the limitation period according to law to events that can generate the obligations of indemnification by the Company, including, but not limited to, the criminal statute applicable deadline, even if such period is applied by administrative authorities. The maximum exposure established by the company (global limit for all eventual claims) until March 24, 2020 is US\$ 500.

The second period of the agreement coverage began on April 25, 2020 and continues until the occurrence of the same kind of events of the first period. The maximum exposure established by the company (global limit for all eventual claims) until March, 2022 is US\$ 300.

Indemnity agreements shall not cover: (i) acts covered under and insurance policy purchased by the Company, as formally recognized and implemented by the insurance company; (ii) acts outside the regular exercise of the duties or powers of the Beneficiaries; (iii) acts in bad faith act, malicious acts, fraud or serious fault on the part of the Beneficiaries; (iv) self-interested acts or in favor of third parties that damage the company's social interest; (v) obligation to pay damages arising from social action according to article 159 of Law 6,404/76 or reimbursement of the damages according to art. 11, § 5°, II of Law 6,385/76; (iv) other cases where a manifest conflict of interest with the company is established. It is worth noting that after a final unappealable decision, if it is proved that the act performed by the beneficiary is not subject to indemnification, the beneficiary is obligated to return the advanced amounts to the company. Petrobras will have no obligation to indemnify the Beneficiaries for loss of profits, loss of business opportunity, interruption of professional activity, moral damages or indirect damages.

In case of potential conflicts of interest, it is important to mention that the company may hire outside professionals, with a principled, impartial and independent reputation and with a strong experience to evaluate eventual indemnity lawsuits, verifying whether or not the act will be covered. In addition, the beneficiary of an indemnity agreement would be prevented from attending meetings or discussions concerning the payment approval of his or her own expenses.

## 40. Supplemental information on statement of cash flows

	2020	2019	2018
<b>Additional information on cash flows:</b>			
<b>Amounts paid/received during the period:</b>			
Withholding income tax paid on behalf of third-parties	770	1,165	839
<b>Capital expenditures and financing activities not involving cash</b>			
Purchase of property, plant and equipment on credit	310	76	137
Lease	4,255	2,301	-
Provision/(reversals) for decommissioning costs	5,174	5,497	4,777
Use of deferred tax and judicial deposit for the payment of contingency	2	3	60

## 41. Subsequent events

### Sale of Mangue Seco Wind Farms 1, 3 and 4

In January 2021, Petrobras signed a contract to sell all of its interests in companies that are part of the Company's wind farm complex.

### Sale of E&P assets in Espírito Santo (Polo Peroá)

On January 29, 2021, Petrobras signed a contract for the sale of all of its interests in the Peroá and Congoá production fields and in the BM-ES-21 concession, jointly called Polo Peroá and located in the Espírito Santo basin. The total sales are up to US\$ 55, of which (a) US\$ 5 paid at the contract signing; (b) US\$ 7.5 to be paid at the transaction closing and (c) up to US\$ 42.5 as contingent payments provided for in the contract, related to factors such as Malombe's declaration of commerciality, future oil prices and extension of the concession terms. This transaction is subject to price adjustments and to the fulfillment of conditions precedent, such as approval by the ANP.

## NOTES TO THE FINANCIAL STATEMENTS

### PETROBRAS

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#### **Sale of Frade Field**

On February 5, 2021, the Company finalized the sale of its 30% stake in the Frade field to PetroRio Jaguar Petróleo Ltda., a subsidiary of Petro Rio S.A. (PetroRio), which holds the remaining 70%. The transaction also included the sale of the entire interest held by Petrobras Frade Inversões S.A. (PFISA), a Petrobras subsidiary, in the company Frade BV to PetroRio Luxembourg, which now holds 100% of Frade BV.

The operation was concluded with the payment of US\$ 36 to Petrobras at the closing date, as provided for in the contract including price adjustments. This amount is in addition to the amount of US\$ 7.5 paid to Petrobras upon the contract signing. In addition, there is an amount of US\$ 20 contingent on a potential new commercial discovery in the field.

#### **Sale of Petrobras Uruguay Distribución S.A. (PUDSA)**

On February 5, 2021, Petrobras Uruguay Sociedad Anónima de Inversões (PUSAI), an indirect subsidiary of Petrobras, completed the sale of its entire stake in Petrobras Uruguay Distribución SA (PUDSA), in Uruguay, to Mauruguay SA, a fully indirect subsidiary of Disa Corporación Petrolífera SA (DISA).

After all the conditions precedent were met, the transaction was concluded with the payment of US\$ 62, including price adjustments provided for in the contract. This amount adds up to the amount of US\$ 6 paid to PUSAI upon the contract signing, totaling US\$ 68.

#### **Sale of BSBios**

On February 9, 2021, Petrobras Biocombustível SA (PBio) completed the sale of all of its shares (50% of the company's capital) issued by BSBios Indústria e Comércio de Biodiesel Sul Brasil S.A. (BSBios) to the company RP Participações em Biocombustíveis SA.

After all the conditions precedent were met, the transaction was concluded with the payment of US\$ 48 to PBio, including price adjustments provided for in the contract. In addition to this amount, US\$ 13 is held in an escrow account for indemnification of eventual contingencies and released according to terms and conditions set forth in the contract, and US\$ 1 was received in advance as interest on capital in December 2020, totaling US\$ 62.

#### **Sale of onshore fields in Bahia**

On February 24, 2021, Petrobras signed with SPE Miranga S.A., a wholly owned subsidiary of PetroRecôncavo S.A., a contract for the sale of its total interest in nine onshore exploration and production fields, called Miranga group, located in the state of Bahia.

The sale amounts to up to US\$ 220, of which (a) US\$ 11 paid upon the contract signing; (b) US\$ 44 to be paid at the transaction closing; (c) US\$ 80 deferred in three installments over three years from the transaction closing, and (d) up to US\$ 85 million in contingent payments related to future average Brent prices for the years 2022, 2023 and 2024. This transaction includes price adjustments and is still subject to conditions precedent, such as approval by the ANP.

#### **Sale of Mangue Seco Wind Farm 2**

On February 24, 2021, Petrobras signed a contract with Fundo de Investimento em Participações Multiestratégia Pirineus (FIP Pirineus) for the sale of its entire 51% interest in Eólica Mangue Seco 2 (a wind farm plant). The transaction results from the exercise of the preemptive right by FIP Pirineus, in accordance with the shareholders' agreement of Eólica Mangue Seco 2, and amounts to US\$ 6, to be paid at the transaction closing, subject to price adjustments.

#### **Samsung leniency agreement**

In February and March 2021, Petrobras received US\$ 65 and US\$ 59, respectively, comprising the total amount of the the leniency agreement of Samsung Heavy Industries with Brazilian Federal Prosecutor's Office.

#### **Approval of the sale of the RLAM refinery**

## NOTES TO THE FINANCIAL STATEMENTS

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*(Expressed in millions of US Dollars, unless otherwise indicated)*

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On March 24, 2021, the Company's Board of Directors approved the sale of Landulpho Alves Refinery (RLAM) and its associated logistics assets, in the state of Bahia, to Mubadala Capital for the amount of US\$ 1.65 billion. The purchase and sale agreement is expected to be signed shortly after the approval.

This sale is subject to price adjustments arising from changes in working capital, net debt and investments until the transaction closing, and to the fulfillment of certain conditions precedent, such as approval by the CADE.

## **42. Information related to guaranteed securities issued by subsidiaries**

### **42.1. Petrobras Global Finance B.V. (PGF)**

Petróleo Brasileiro S.A. - Petrobras fully and unconditionally guarantees the debt securities issued by Petrobras Global Finance B.V. (PGF), a 100-percent-owned finance subsidiary of Petrobras. There are no significant restrictions on the ability of Petrobras to obtain funds from PGF.

## Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

### Supplementary information on Oil and Gas Exploration and Production (unaudited)

This section provides supplemental information on oil and gas exploration and production activities of the Company. The information included in items (i) through (iii) provides historical cost information pertaining to costs incurred in exploration, property acquisition and development, capitalized costs and results of operations. The information included in items (iv) and (v) presents information on Petrobras' estimated net proved reserve quantities, standardized measure of estimated discounted future net cash flows related to proven reserves, and changes in estimated discounted future net cash flows.

The Company, on December 31, 2020, maintains activities mainly in Brazil, in addition to activities in Argentina, Colombia and Bolivia, in South America. The equity-accounted investments are comprised of the operations of the joint venture company MP Gulf of Mexico, LLC (MPGoM), in which Murphy Exploration & Production Company ("Murphy") has 80% stake and Petrobras America Inc ("PAI") 20% stake in United States of America, North America. The Company reports its reserves in Brazil, United States of America and Argentina. Bolivian reserves are not included due to restrictions determined by Bolivian Constitution. In Colombia, our activities are exploratory, and therefore, there are no associated reserves.

#### i) Capitalized costs relating to oil and gas producing activities

As set out in note 28, the Company uses the successful efforts method of accounting for appraisal and development costs of crude oil and natural gas production. In addition, notes 25.3 and 26.2 presents the accounting policies applied by the Company for recognition, measurement and disclosure of property, plant and equipment and intangible assets.

The following table summarizes capitalized costs for oil and gas exploration and production activities with the related accumulated depreciation, depletion and amortization, and asset retirement obligations:

	Consolidated entities						Equity Method Investees
	Abroad					Total	
	Brazil	South America	North America	Others	Total		
<b>December 31, 2020</b>							
Unproved oil and gas properties	17,438	112	-	-	112	17,550	-
Proved oil and gas properties	61,857	140	-	-	140	61,997	792
Support Equipment	73,199	761	-	1	762	73,961	-
Gross Capitalized costs	152,494	1,013	-	1	1,014	153,508	792
Depreciation, depletion and amortization	(43,008)	(687)	-	(1)	(688)	(43,696)	(316)
<b>Net capitalized costs</b>	<b>109,486</b>	<b>326</b>	<b>-</b>	<b>-</b>	<b>326</b>	<b>109,812</b>	<b>476</b>
<b>December 31, 2019</b>							
Unproved oil and gas properties	23,063	117	-	-	117	23,180	-
Proved oil and gas properties	81,063	135	-	-	135	81,198	4,202
Support Equipment	88,289	687	-	1	688	88,977	-
Gross Capitalized costs	192,414	940	-	1	941	193,355	4,202
Depreciation, depletion and amortization	(51,332)	(581)	-	(1)	(582)	(51,914)	(1,690)
<b>Net capitalized costs</b>	<b>141,081</b>	<b>359</b>	<b>-</b>	<b>-</b>	<b>359</b>	<b>141,441</b>	<b>2,513</b>
<b>December 31, 2018</b>							
Unproved oil and gas properties	5,999	112	-	-	112	6,111	-
Proved oil and gas properties	88,572	144	-	-	144	88,716	4,091
Support Equipment	83,822	649	-	389	1,038	84,860	6
Gross Capitalized costs	178,393	905	-	389	1,294	179,687	4,097
Depreciation, depletion and amortization	(60,890)	(544)	-	(29)	(573)	(61,463)	(1,410)
<b>Net capitalized costs</b>	<b>117,503</b>	<b>361</b>	<b>-</b>	<b>360</b>	<b>721</b>	<b>118,224</b>	<b>2,687</b>

## Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

### ii) Costs incurred in oil and gas property acquisition, exploration and development activities

Costs incurred are summarized below and include both amounts expensed and capitalized:

	Consolidated entities						Equity Method Investees
	Abroad					Total	
	Brazil	South America	North America	Others	Total		
<b>December 31, 2020</b>							
Acquisition costs:							
Proved	315	-	-	-	-	315	-
Unproved (*)	24	-	-	-	-	24	-
Exploration costs	805	10	-	-	10	815	-
Development costs	5,664	3	-	-	3	5,667	57
<b>Total</b>	<b>6,808</b>	<b>13</b>	<b>-</b>	<b>-</b>	<b>13</b>	<b>6,821</b>	<b>57</b>
<b>December 31, 2019</b>							
Acquisition costs:							
Proved	-	-	-	-	-	-	-
Unproved (*)	16,670	-	-	-	-	16,670	-
Exploration costs	1,069	11	-	-	11	1,080	3
Development costs	6,819	6	-	-	6	6,825	150
<b>Total</b>	<b>24,558</b>	<b>17</b>	<b>-</b>	<b>-</b>	<b>17</b>	<b>24,575</b>	<b>153</b>
<b>December 31, 2018</b>							
Acquisition costs:							
Proved	-	-	-	-	-	-	-
Unproved	832	-	-	-	-	832	-
Exploration costs	776	10	1	-	11	787	5
Development costs	9,685	32	229	-	261	9,946	252
<b>Total</b>	<b>11,293</b>	<b>43</b>	<b>230</b>	<b>-</b>	<b>272</b>	<b>11,565</b>	<b>257</b>

(\*) Mainly acquisition of oil exploration rights - Transfer of Rights, according to note 23.4

### (iii) Results of operations for oil and gas producing activities

The Company's results of operations from oil and gas producing activities for the years ended December 31, 2020, 2019 and 2018 are shown in the following table. The Company transfers substantially all of its Brazilian crude oil and gas production to the Refining, Transportation & Marketing segment in Brazil. The internal transfer prices calculated by the Company's model may not be indicative of the price the Company would have realized had this production been sold in an unregulated spot market. Additionally, the prices calculated by the Company's model may not be indicative of the future prices to be realized by the Company. Gas prices used are those set out in contracts with third parties.

Production costs are lifting costs incurred to operate and maintain productive wells and related equipment and facilities, including operating employees' compensation, materials, supplies, fuel consumed in operations and operating costs related to natural gas processing plants.

Exploration expenses include the costs of geological and geophysical activities and projects without economic feasibility. Depreciation and amortization expenses relate to assets employed in exploration and development activities. In accordance with Codification Topic 932 – Extractive Activities – Oil and Gas, income taxes are based on statutory tax rates, reflecting allowable deductions. Interest income and expense are excluded from the results reported in this table.

# Petróleo Brasileiro S.A. – Petrobras

## Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

	Consolidated entities						Equity Method Investees
	Abroad					Total	
	Brazil	South America	North America	Others	Total		
<b>December 31, 2020</b>							
Net operation revenues:							
Sales to third parties	763	108	-	-	108	871	148
Intersegment	33,524	-	-	-	-	33,524	-
	34,287	108	-	-	108	34,395	148
Production costs	(9,378)	(59)	-	-	(59)	(9,437)	(54)
Exploration expenses	(796)	(7)	-	-	(7)	(803)	-
Depreciation, depletion and amortization	(8,611)	(50)	-	-	(50)	(8,661)	(57)
Impairment of oil and gas properties	(7,364)	-	-	-	-	(7,364)	-
Other operating expenses	(885)	(2)	(167)	(26)	(195)	(1,080)	(158)
Results before income tax expenses	7,253	(10)	(167)	(26)	(203)	7,050	(121)
Income tax expenses	(2,466)	3	57	9	69	(2,398)	41
<b>Results of operations (excluding corporate overhead and interest costs)</b>	<b>4,786</b>	<b>(7)</b>	<b>(110)</b>	<b>(17)</b>	<b>(134)</b>	<b>4,652</b>	<b>(80)</b>
<b>December 31, 2019</b>							
Net operation revenues:							
Sales to third parties	888	174	-	-	174	1,062	1,114
Intersegment	49,400	-	-	-	-	49,400	-
	50,288	174	-	-	174	50,462	1,114
Production costs	(15,749)	(69)	-	-	(69)	(15,818)	(124)
Exploration expenses	(793)	(6)	-	-	(6)	(799)	(5)
Depreciation, depletion and amortization	(11,436)	(37)	-	(13)	(50)	(11,486)	(292)
Impairment of oil and gas properties	(1,535)	-	-	(421)	(421)	(1,956)	-
Other operating expenses	(1,420)	(13)	41	(34)	(6)	(1,426)	(20)
Results before income tax expenses	19,354	50	41	(468)	(377)	18,977	672
Income tax expenses	(6,579)	(17)	(14)	159	128	(6,451)	(229)
<b>Results of operations (excluding corporate overhead and interest costs)</b>	<b>12,775</b>	<b>33</b>	<b>27</b>	<b>(309)</b>	<b>(249)</b>	<b>12,526</b>	<b>443</b>
<b>December 31, 2018</b>							
Net operation revenues:							
Sales to third parties	1,142	190	998	-	1,188	2,330	375
Intersegment	50,052	-	-	-	-	50,052	-
	51,194	190	998	-	1,188	52,382	375
Production costs	(19,741)	(77)	(152)	-	(229)	(19,970)	(40)
Exploration expenses	(516)	(7)	(1)	-	(8)	(524)	(2)
Depreciation, depletion and amortization	(8,716)	(40)	(221)	(21)	(282)	(8,998)	(109)
Impairment of oil and gas properties	(686)	-	(705)	-	(705)	(1,391)	-
Other operating expenses	(2,188)	(839)	(88)	(38)	(965)	(3,153)	(12)
Results before income tax expenses	19,347	(773)	(169)	(59)	(1,001)	18,346	212
Income tax expenses	(6,576)	263	57	20	340	(6,236)	(162)
<b>Results of operations (excluding corporate overhead and interest costs)</b>	<b>12,771</b>	<b>(510)</b>	<b>(112)</b>	<b>(39)</b>	<b>(661)</b>	<b>12,110</b>	<b>50</b>

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#### (iv) Reserve quantities information

As presented in note 4.1, 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, operating methods, and government regulations – prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain. The project to extract the hydrocarbons must have commenced or there must be reasonable certainty that the project will commence within a reasonable time. Reserves estimate involves a high degree of judgment and complexity and its application affects different items of these Financial Statements.

The Company's estimated net proved oil and gas reserves and changes thereto for the years 2020, 2019 and 2018 are presented in the following table. Proved reserves are estimated in accordance with the reserve definitions prescribed by the Securities and Exchange Commission.

Proved developed oil and gas reserves are proved reserves that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is done by means not involving a well.

Proved reserves for which substantial new investments in additional wells and related facilities will be required are named proved undeveloped reserves.

Reserve estimates are subject to variations due to technical uncertainties in the reservoir and changes in economic scenarios. A summary of the annual changes in the proved reserves of oil is as follows (in millions of barrels):

Proved developed and undeveloped reserves(*)	Consolidated Entities				Equity Method Investees			Total
	Crude oil in Brazil	Crude Oil in South America	Crude Oil in North America	Synthetic Oil in Brazil	Consolidated Total	Crude Oil in North America	Crude Oil in Africa	
<b>Reserves at December 31, 2017 (1)</b>	<b>8,249.4</b>	<b>1.2</b>	<b>114.6</b>	<b>6.0</b>	<b>8,371.3</b>	<b>-</b>	<b>63.4</b>	<b>8,434.7</b>
Transfers by loss of control (2)	-	-	(100.4)	-	(100.4)	100.4	-	-
Revisions of previous estimates	342.7	-	-	(0.3)	342.5	(0.9)	3.7	345.3
Extensions and discoveries	308.5	0.6	-	-	309.1	-	-	309.1
Improved Recovery	224.2	-	-	-	224.2	-	-	224.2
Sales of reserves	(254.8)	-	-	-	(254.8)	(80.4)	-	(335.2)
Purchases of reserves	-	-	-	-	-	7.9	-	7.9
Production for the year	(701.3)	(0.3)	(14.3)	(0.9)	(716.8)	(0.4)	(7.3)	(724.5)
<b>Reserves at December 31, 2018 (1)</b>	<b>8,168.7</b>	<b>1.6</b>	<b>-</b>	<b>4.8</b>	<b>8,175.1</b>	<b>26.6</b>	<b>59.8</b>	<b>8,261.5</b>
Revisions of previous estimates	718.8	-	-	-	718.8	0.7	(6.5)	713.0
Extensions and discoveries	17.5	-	-	3.6	21.1	-	0.6	21.7
Improved Recovery	-	-	-	-	-	-	-	-
Sales of reserves	(68.3)	-	-	-	(68.3)	-	-	(68.3)
Purchases of reserves	-	-	-	-	-	-	-	-
Production for the year	(753.9)	(0.2)	-	(0.8)	(754.8)	(4.7)	(12.3)	(771.7)
<b>Reserves at December 31, 2019 (1)</b>	<b>8,082.8</b>	<b>1.4</b>	<b>-</b>	<b>7.7</b>	<b>8,091.9</b>	<b>22.7</b>	<b>41.6</b>	<b>8,156.1</b>
Revisions of previous estimates	268.7	(0.9)	-	(6.8)	261.0	(0.4)	-	260.7
Extensions and discoveries	34.8	-	-	-	34.8	-	-	34.8
Improved Recovery	-	-	-	-	-	-	-	-
Sales of reserves	(60.8)	-	-	-	(60.8)	-	(41.1)	(101.8)
Purchases of reserves	-	-	-	-	-	-	-	-
Production for the year	(791.7)	(0.2)	-	(0.9)	(792.8)	(4.2)	(0.5)	(797.5)
<b>Reserves at December 31, 2020</b>	<b>7,533.9</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>7,534.2</b>	<b>18.1</b>	<b>-</b>	<b>7,552.3</b>

(1) In 2017, total proved reserves includes 263.7 million barrels related to assets held for sale. In 2018, total proved reserves includes 59.8 million barrels related to PO&G assets held for sale. In 2019, total proved reserves include 41.6 million barrels of assets held for sale (PO&G).

(2) Amounts transferred from consolidated entities to equity method investees, as the Company concluded the operation that has resulted in the formation of a joint venture company ("JV"), of which Murphy Exploration & Production Company ("Murphy") has 80% stake and Petrobras America Inc ("PAI") 20% stake.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

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A summary of the annual changes in the proved reserves of natural gas is as follows (in billions of cubic feet):

Proved developed and undeveloped reserves (*)	Consolidated Entities					Equity Method Investees		Total
	Natural Gas in Brazil	Natural Gas in South America	Natural Gas in North America	Synthetic Gas in Brazil	Consolidated Total	Gas Natural in North America	Gas Natural in Africa	
<b>Reserves at December 31, 2017 (1)</b>	<b>7,676.1</b>	<b>160.2</b>	<b>40.9</b>	<b>8.1</b>	<b>7,885.3</b>	<b>-</b>	<b>17.3</b>	<b>7,902.6</b>
Transfers by loss of control (2)	-	-	(36.8)	-	(36.8)	36.8	-	-
Revisions of previous estimates	737.2	-	-	(1.0)	736.2	(3.1)	34.8	768.0
Extensions and discoveries	136.8	70.1	-	-	206.9	-	-	206.9
Improved Recovery	207.6	-	-	-	207.6	-	-	207.6
Sales of reserves	(165.5)	-	-	-	(165.5)	(29.7)	-	(195.2)
Purchases of reserves	-	-	-	-	-	6.9	-	6.9
Production for the year	(801.8)	(16.2)	(4.1)	(1.3)	(823.5)	(0.1)	(4.8)	(828.4)
<b>Reserves at December 31, 2018 (1)</b>	<b>7,790.5</b>	<b>214.1</b>	<b>-</b>	<b>5.7</b>	<b>8,010.3</b>	<b>10.8</b>	<b>47.3</b>	<b>8,068.5</b>
Revisions of previous estimates	1,415.7	(42.3)	-	-	1,373.4	0.1	10.9	1,384.4
Extensions and discoveries	15.3	-	-	7.6	22.9	-	0.3	23.2
Improved Recovery	-	-	-	-	-	-	-	-
Sales of reserves	(24.0)	-	-	-	(24.0)	-	-	(24.0)
Purchases of reserves	-	-	-	-	-	-	-	-
Production for the year	(816.9)	(15.5)	-	(1.2)	(833.7)	(1.7)	(11.3)	(846.7)
<b>Reserves at December 31, 2019 (1)</b>	<b>8,380.6</b>	<b>156.3</b>	<b>-</b>	<b>12.1</b>	<b>8,549.0</b>	<b>9.2</b>	<b>47.2</b>	<b>8,605.4</b>
Revisions of previous estimates	(92.5)	(118.7)	-	(10.8)	(221.9)	0.2	-	(221.7)
Extensions and discoveries	36.0	-	-	-	36.0	-	-	36.0
Improved Recovery	-	-	-	-	-	-	-	-
Sales of reserves	(42.3)	-	-	-	(42.3)	-	(47.2)	(89.5)
Purchases of reserves	-	-	-	-	-	-	-	-
Production for the year	(735.2)	(12.0)	-	(1.4)	(748.5)	(1.6)	-	(750.1)
<b>Reserves at December 31, 2020</b>	<b>7,546.7</b>	<b>25.6</b>	<b>-</b>	<b>-</b>	<b>7,572.3</b>	<b>7.8</b>	<b>-</b>	<b>7,580.1</b>

(1) In 2017, total proved reserves includes 173.7 billion cubic feet related to assets held for sale. In 2018, total proved reserves includes 47.3 billion cubic feet related to PO&G assets held for sale. In 2019, total proved reserves includes 47.2 billion cubic feet related to PO&G assets held for sale.

(2) Amounts transferred from consolidated entities to equity method investees, as the Company concluded the operation that has resulted in the formation of a joint venture company ("JV"), of which Murphy Exploration & Production Company ("Murphy") has 80% stake and Petrobras America Inc ("PAI") 20% stake.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

Natural gas production volumes used in these tables are the net volumes withdrawn from our proved reserves, including gas consumed in operations and excluding reinjected gas. Our disclosure of proved gas reserves includes gas consumed in operations, which represent 30% of our total proved reserves of natural gas as of December 31, 2020.

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The tables below summarize information about the changes in total proved reserves of crude oil and natural gas, in millions of barrels of oil equivalent, in our consolidated entities and equity method investees for 2020, 2019 and 2018:

Proved developed and undeveloped reserves(*)	Consolidated Entities				Equity Method Investees			Total
	Oil equivalent in Brazil	Oil equivalent in South America	Oil equivalent in North America	Synthetic Oil in Brazil	Consolidated Total	Oil equivalent in North America	Oil equivalent in Africa	
<b>Reserves at December 31, 2017 (1)</b>	9,528.8	27.9	121.5	7.4	9,685.5	–	66.3	9,751.7
Transfers by loss of control (2)	–	–	(106.5)	–	(106.5)	106.5	–	–
Revisions of previous estimates	465.6	–	–	(0.4)	465.2	(1.4)	9.6	473.3
Extensions and discoveries	331.3	12.3	–	–	343.6	–	–	343.6
Improved Recovery	258.8	–	–	–	258.8	–	–	258.8
Sales of reserves	(282.4)	–	–	–	(282.4)	(85.4)	–	(367.8)
Purchases of reserves	–	–	–	–	–	9.1	–	9.1
Production for the year	(834.9)	(3.0)	(15.0)	(1.2)	(854.0)	(0.5)	(8.1)	(862.6)
<b>Reserves at December 31, 2018 (1)</b>	9,467.1	37.2	–	5.8	9,510.1	28.4	67.7	9,606.2
Revisions of previous estimates	954.7	(7.0)	–	–	947.7	0.7	(4.7)	943.7
Extensions and discoveries	20.1	–	–	4.9	25.0	–	0.6	25.6
Improved Recovery	–	–	–	–	–	–	–	–
Sales of reserves	(72.3)	–	–	–	(72.3)	–	–	(72.3)
Purchases of reserves	–	–	–	–	–	–	–	–
Production for the year	(890.0)	(2.8)	–	(1.0)	(893.8)	(4.9)	(14.1)	(912.8)
<b>Reserves at December 31, 2019 (1)</b>	9,479.6	27.4	–	9.7	9,516.7	24.2	49.5	9,590.4
Revisions of previous estimates	253.3	(20.6)	–	(8.6)	224.1	(0.3)	–	223.7
Extensions and discoveries	40.8	–	–	–	40.8	–	–	40.8
Improved Recovery	–	–	–	–	–	–	–	–
Sales of reserves	(67.8)	–	–	–	(67.8)	–	(49.0)	(116.8)
Purchases of reserves	–	–	–	–	–	–	–	–
Production for the year	(914.2)	(2.2)	–	(1.2)	(917.6)	(4.5)	(0.5)	(922.5)
<b>Reserves at December 31, 2020</b>	8,791.7	4.6	–	–	8,796.3	19.4	–	8,815.7

(1) In 2017, total proved reserves includes 292.7 million barrels of oil equivalent related to assets held for sale in Brazil; in 2018, includes 67.7 million barrels of oil equivalent related to PO&G assets held for sale in Africa; and in 2019, includes 49.5 million barrels of oil equivalent related to assets held for sale in Africa.

(2) Amounts transferred from consolidated entities to equity method investees, as the Company concluded the operation that has resulted in the formation of a joint venture company ("JV"), of which Murphy Exploration & Production Company ("Murphy") has 80% stake and Petrobras America Inc ("PAI") 20% stake.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

In 2020, we incorporated 223.7 million boe of proved reserves by revising previous estimates, including:

(i) addition of 637.1 million boe arising from technical revisions, mainly due to good performance and increased production experience in reservoirs in the pre-salt layer of Santos Basin;

(ii) addition of 253.9 million boe due to approvals of new projects in the Santos and Campos Basins; and

(iii) reduction of 667.2 million boe related to economic revisions, mainly due to the decrease in oil prices.

In addition, we added 40.8 million boe to our proved reserves due to extensions and discoveries in the pre-salt of Santos Basin, and reduced 116.8 million boe due to sales of proved reserves.

The company's total proved reserve resulted in 8,815.7 million boe in 2020, considering the variations above and the reduction from 2020 production of 922.5 million boe. Production refers to volumes that were previously included in our reserves and, therefore, does not consider natural gas liquids, since the reserve is estimated at a reference point prior to gas processing, except in the United States and Argentina. The production also does not consider volumes of injected gas, the production of Extended Well Tests in exploratory blocks and production in Bolivia, since the Bolivian Constitution does not allow the disclosure of reserves.

In 2019, we incorporated 943.7 million boe of reserves proved by revisions of previous estimates, composed of:

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*(Expressed in millions of US Dollars, unless otherwise indicated)*

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(i) addition of 529.1 million boe due to technical reviews, mainly associated with good performance and increased production experience of pre-salt reservoirs in the Santos Basin;

(ii) addition of 266.8 million boe referring to contractual revisions, including the reallocation of volumes due to the revision of the Transfer of Rights agreement, and the extension of concession contracts in Brazil;

(iii) addition of 242.6 million boe due to the approval of new projects in the Santos, Campos and Espírito Santo Basins; and

(iv) a 94.8 million boe reduction due to economic revisions, mainly due to the price reduction.

We also incorporated 25.6 million boe into our proved reserves due to discoveries and extensions, mainly in the Santos Basin pre-salt, and reduced 72.3 million boe from our proved reserves due to proved reserve sales.

Considering the production of 912.8 million boe in 2019 and the variations above, the company's total proved reserve resulted in 9,590.4 million boe in 2019. Production refers to volumes that were included in our reserves and, therefore, does not consider natural gas liquids, since the reserve is estimated at a reference point prior to gas processing, except in the United States and Argentina. The production also does not consider volumes of injected gas, the production of Extended Well Tests in exploratory blocks and production in Bolivia, since the Bolivian Constitution does not allow the disclosure of reserves.

In 2018, we incorporated 473.3 million boe of proved reserves by revising of previous estimates, including 233.5 million boe due to economic revisions, mainly due to the increase in prices, and 239.9 million boe due to technical revisions, mainly due to the good performance of reservoirs in the pre-salt layer of Santos and Campos basins, both in Brazil. In addition, we added 258.8 million boe in our proved reserves resulting from positive responses from improved recovery (water injection), and added 343.6 million boe in our proved reserves due to extensions and discoveries, mainly in the pre-salt of Santos basin.

We reduced 367.8 million boe of our proved reserves due to sales of reserves and increased 9.1 million boe in our proved reserves due to purchases of reserves, resulting in a net effect of a decrease of 358.7 million boe in our proved reserves.

Considering a production of 862.6 million boe in 2018 and changes above, the company total proved reserves resulted in 9,606.2 million boe. This 862.6 million boe production volume is the net volume withdrawn from our proved reserves. Therefore, exclude NGL (except for North America), as we estimate our oil and gas reserves at a reference point prior to the gas processing plants, and does not consider the production of Extended Well Tests (EWTs) in exploratory blocks and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

The tables below present the volumes of proved developed and undeveloped reserves, net, that is, reflecting Petrobras' participation:

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(Expressed in millions of US Dollars, unless otherwise indicated)

	2018				
	Crude Oil	Synthetic Oil	Natural Gas	Synthetic Gas	Total oil and gas
	(mmbbl)		(bcf)		(mmboe)
<b>Net proved developed reserves (*):</b>					
Consolidated Entities					
Brazil	4,339.5	4.8	4,807.0	5.7	5,146.4
South America, outside Brazil	1.0	-	83.5	-	15.0
<b>Total Consolidated Entities</b>	<b>4,340.5</b>	<b>4.8</b>	<b>4,890.5</b>	<b>5.7</b>	<b>5,161.4</b>
Equity Method Investees					
North America (2)	20.0	-	8.3	-	21.4
Africa	30.9	-	27.6	-	35.5
<b>Total Equity Method Investees</b>	<b>51.0</b>	<b>-</b>	<b>35.9</b>	<b>-</b>	<b>56.9</b>
<b>Total Consolidated and Equity Method Investees (1)</b>	<b>4,391.5</b>	<b>4.8</b>	<b>4,926.4</b>	<b>5.7</b>	<b>5,218.3</b>
<b>Net proved undeveloped reserves (*):</b>					
Consolidated Entities					
Brazil	3,829.2	-	2,983.5	-	4,326.4
South America, outside Brazil	0.5	-	130.6	-	22.3
<b>Total Consolidated Entities</b>	<b>3,829.7</b>	<b>-</b>	<b>3,114.1</b>	<b>-</b>	<b>4,348.7</b>
Equity Method Investees					
North America (2)	6.5	-	2.5	-	6.9
Africa	28.9	-	19.7	-	32.2
<b>Total Equity Method Investees</b>	<b>35.4</b>	<b>-</b>	<b>22.2</b>	<b>-</b>	<b>39.1</b>
<b>Total Consolidated and Equity Method Investees (1)</b>	<b>3,865.1</b>	<b>-</b>	<b>3,136.3</b>	<b>-</b>	<b>4,387.9</b>
<b>Total proved reserves (developed and undeveloped)</b>	<b>8,256.6</b>	<b>4.8</b>	<b>8,062.7</b>	<b>5.7</b>	<b>9,606.2</b>

(1) It includes amounts related to assets held for sale (30.9 million barrels of oil and 27.6 billion cubic feet of natural gas in net proved developed reserves and 28.9 million barrels of oil and 19.7 billion cubic feet of natural gas in net proved undeveloped reserves) in Africa (PO&G).

(2) North America oil reserves includes 4.2% of natural gas liquid (NGL) in proved developed reserves and 3.6% of NGL in proved undeveloped reserves.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

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(Expressed in millions of US Dollars, unless otherwise indicated)

	2019				
	Crude Oil (mmbbl)	Synthetic Oil	Natural Gas	Synthetic Gas	Total oil and gas (mmboe)
			(bncf)		
<b>Net proved developed reserves (*):</b>					
Consolidated Entities					
Brazil	4,999.1	7.7	5,715.6	12.1	5,961.4
South America, outside Brazil (2)	0.9	–	66.9	–	12.1
<b>Total Consolidated Entities</b>	<b>5,000.0</b>	<b>7.7</b>	<b>5,782.5</b>	<b>12.1</b>	<b>5,973.5</b>
Equity Method Investees					
North America (2)	18.2	–	7.0	–	19.4
Africa	37.1	–	44.7	–	44.6
<b>Total Equity Method Investees</b>	<b>55.3</b>	<b>–</b>	<b>51.7</b>	<b>–</b>	<b>64.0</b>
<b>Total Consolidated and Equity Method Investees (1)</b>	<b>5,055.3</b>	<b>7.7</b>	<b>5,834.3</b>	<b>12.1</b>	<b>6,037.4</b>
<b>Net proved undeveloped reserves (*):</b>					
Consolidated Entities					
Brazil	3,083.7	–	2,665.0	–	3,527.9
South America, outside Brazil (2)	0.5	–	89.3	–	15.4
<b>Total Consolidated Entities</b>	<b>3,084.2</b>	<b>–</b>	<b>2,754.3</b>	<b>–</b>	<b>3,543.3</b>
Equity Method Investees					
North America (2)	4.4	–	2.2	–	4.8
Africa	4.5	–	2.4	–	4.9
<b>Total Equity Method Investees</b>	<b>8.9</b>	<b>–</b>	<b>4.6</b>	<b>–</b>	<b>9.7</b>
<b>Total Consolidated and Equity Method Investees (1)</b>	<b>3,093.1</b>	<b>–</b>	<b>2,759.0</b>	<b>–</b>	<b>3,552.9</b>
<b>Total proved reserves (developed and undeveloped)</b>	<b>8,148.4</b>	<b>7.7</b>	<b>8,593.2</b>	<b>12.1</b>	<b>9,590.4</b>

(1) It includes amounts related to assets held for sale (37.1 million barrels of oil and 44.7 billion cubic feet of natural gas in net proved developed reserves and 4.5 million barrels of oil and 2.4 billion cubic feet of natural gas in net proved undeveloped reserves) in Africa (PO&G).

(2) South America oil reserves includes 20.3% of natural gas liquid (NGL) in proved developed reserves and 59.2% of NGL in proved undeveloped reserves. North America oil reserves includes 3.8% of natural gas liquid (NGL) in proved developed reserves and 5.3% of NGL in proved undeveloped reserves.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

	2020				
	Crude Oil (mmbbl)	Synthetic Oil	Natural Gas	Synthetic Gas	Total oil and gas (mmboe)
			(bncf)		
<b>Net proved developed reserves (*):</b>					
Consolidated Entities					
Brazil	4,857.6	–	5,713.9	–	5,809.9
South America, outside Brazil (1)	0.3	–	25.6	–	4.6
<b>Total Consolidated Entities</b>	<b>4,857.9</b>	<b>–</b>	<b>5,739.5</b>	<b>–</b>	<b>5,814.5</b>
Equity Method Investees					
North America (1)	16.9	–	7.2	–	18.1
<b>Total Equity Method Investees</b>	<b>16.9</b>	<b>–</b>	<b>7.2</b>	<b>–</b>	<b>18.1</b>
<b>Total Consolidated and Equity Method Investees</b>	<b>4,874.8</b>	<b>–</b>	<b>5,746.7</b>	<b>–</b>	<b>5,832.6</b>
<b>Net proved undeveloped reserves (*):</b>					
Consolidated Entities					
Brazil	2,676.3	–	1,832.8	–	2,981.8
South America, outside Brazil (1)	–	–	–	–	–
<b>Total Consolidated Entities</b>	<b>2,676.3</b>	<b>–</b>	<b>1,832.8</b>	<b>–</b>	<b>2,981.8</b>
Equity Method Investees					
North America (1)	1.2	–	0.6	–	1.3
<b>Total Equity Method Investees</b>	<b>1.2</b>	<b>–</b>	<b>0.6</b>	<b>–</b>	<b>1.3</b>
<b>Total Consolidated and Equity Method Investees</b>	<b>2,677.5</b>	<b>–</b>	<b>1,833.4</b>	<b>–</b>	<b>2,983.1</b>
<b>Total proved reserves (developed and undeveloped)</b>	<b>7,552.3</b>	<b>–</b>	<b>7,580.1</b>	<b>–</b>	<b>8,815.7</b>

(1) South America oil reserves includes 21.3% of natural gas liquid (NGL) in proved developed reserves. North America oil reserves includes 6.3% of natural gas liquid (NGL) in proved developed reserves and 5.3% of NGL in proved undeveloped reserves.

(\*) Apparent differences in the sum of the numbers are due to rounding off.

## **Petróleo Brasileiro S.A. – Petrobras**

Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

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### **(v) Standardized measure of discounted future net cash flows relating to proved oil and gas quantities and changes therein**

The standardized measure of discounted future net cash flows, related to the above proved oil and gas reserves, is calculated in accordance with the requirements of Codification Topic 932 – Extractive Activities – Oil and Gas.

Estimated future cash inflows from production in Brazil are computed by applying the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. Future price changes are limited to those provided by contractual arrangements existing at the end of each reporting year. Future development and production costs are those estimated future expenditures necessary to develop and produce year-end estimated proved reserves based on current costs, assuming continuing economic conditions. Estimated future income taxes (including future social contributions on net income - CSLL) are calculated by applying appropriate year-end statutory tax rates. The amounts presented as future income taxes expenses reflect allowable deductions considering statutory tax rates. Discounted future net cash flows are calculated using 10% mid-period discount factors. This discounting requires a year-by-year estimate of when the future expenditures will be incurred and when the reserves will be produced.

The valuation prescribed under Codification Topic 932 – Extractive Activities – Oil and Gas requires assumptions as to the timing and amount of future development and production costs. The calculations are made as of December 31 each year and should not be relied upon as an indication of Petrobras' future cash flows or the value of its oil and gas reserves.

# Petróleo Brasileiro S.A. – Petrobras

## Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

### Standardized measure of discounted future net cash flows:

	Consolidated entities					Equity Method Investees (2)
	Abroad				Total	
	Brazil	South America	North America	Total		
<b>December 31, 2020</b>						
Future cash inflows	333,248	69	-	69	333,317	667
Future production costs	(182,534)	(51)	-	(51)	(182,585)	(465)
Future development costs	(31,236)	(16)	-	(16)	(31,252)	(48)
Future income tax expenses	(46,862)	-	-	-	(46,862)	(79)
Undiscounted future net cash flows	72,616	2	-	2	72,618	75
10 percent midyear annual discount for timing of estimated cash flows (1)	(26,638)	-	-	-	(26,638)	(1)
<b>Standardized measure of discounted future net cash flows</b>	<b>45,978</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>45,979</b>	<b>74</b>
<b>December 31, 2019</b>						
Future cash inflows	535,788	609	-	609	536,397	4,045
Future production costs	(272,381)	(285)	-	(285)	(272,666)	(1,349)
Future development costs	(34,346)	(141)	-	(141)	(34,487)	(515)
Future income tax expenses	(86,012)	(31)	-	(31)	(86,044)	(438)
<b>Undiscounted future net cash flows</b>	<b>143,049</b>	<b>152</b>	<b>-</b>	<b>152</b>	<b>143,200</b>	<b>1,743</b>
<b>10 percent midyear annual discount for timing of estimated cash flows (1)</b>	<b>(54,928)</b>	<b>(83)</b>	<b>-</b>	<b>(83)</b>	<b>(55,010)</b>	<b>(332)</b>
<b>Standardized measure of discounted future net cash flows</b>	<b>88,121</b>	<b>69</b>	<b>-</b>	<b>69</b>	<b>88,190</b>	<b>1,412</b>
<b>December 31, 2018</b>						
Future cash inflows	601,754	1,112	-	1,112	602,866	5,998
Future production costs	(269,942)	(425)	-	(425)	(270,367)	(1,570)
Future development costs	(34,119)	(218)	-	(218)	(34,337)	(520)
Future income tax expenses	(111,522)	(91)	-	(91)	(111,613)	(1,006)
Undiscounted future net cash flows	186,171	379	-	379	186,549	2,903
10 percent midyear annual discount for timing of estimated cash flows (1)	(75,050)	(194)	-	(194)	(75,244)	(613)
<b>Standardized measure of discounted future net cash flows</b>	<b>111,121</b>	<b>185</b>	<b>-</b>	<b>185</b>	<b>111,305</b>	<b>2,290</b>

(1) Semiannual capitalization

(2) Includes the amount of US\$ 1,675 millions related to PO&G assets classified as held for sale in 2018. Includes the amount of US\$ 1,047 millions related to PO&G assets classified as held for sale in 2019. Apparent differences in the sum of the numbers are due to rounding off.

# Petróleo Brasileiro S.A. – Petrobras

## Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

### Changes in discounted net future cash flows:

	Consolidated entities					Equity Method Investees (2)
	Abroad				Total	
	Brazil (1)	South America	North America	Total		
Balance at January 1, 2020	88,121	69	-	69	88,190	1,412
Sales and transfers of oil and gas, net of production cost	(24,908)	(14)	-	(14)	(24,922)	(94)
Development cost incurred	5,664	3	-	3	5,666	57
Net change due to purchases and sales of minerals in place	(847)	-	-	-	(847)	(1,047)
Net change due to extensions, discoveries and improved recovery related costs	509	-	-	-	509	-
Revisions of previous quantity estimates	3,160	(35)	-	(35)	3,125	(10)
Net change in prices, transfer prices and in production costs	(54,606)	(145)	-	(145)	(54,751)	(375)
Changes in estimated future development costs	(4,716)	97	-	97	(4,618)	67
Accretion of discount	8,812	9	-	9	8,821	12
Net change in income taxes	24,788	24	-	24	24,812	51
Other - unspecified	-	(7)	-	(7)	(7)	1
<b>Balance at December 31, 2020</b>	<b>45,978</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>45,979</b>	<b>74</b>
Balance at January 1, 2019	111,121	185	-	185	111,305	2,290
Sales and transfers of oil and gas, net of production cost	(34,522)	(65)	-	(65)	(34,587)	(792)
Development cost incurred	6,819	6	-	6	6,826	150
Net change due to purchases and sales of minerals in place	(1,387)	-	-	-	(1,387)	-
Net change due to extensions, discoveries and improved recovery related costs	385	-	-	-	385	-
Revisions of previous quantity estimates	18,317	(44)	-	(44)	18,273	8
Net change in prices, transfer prices and in production costs	(34,114)	(145)	-	(145)	(34,259)	(505)
Changes in estimated future development costs	(5,324)	60	-	60	(5,265)	(97)
Accretion of discount	11,112	25	-	25	11,137	244
Net change in income taxes	15,714	41	-	41	15,755	363
Other - unspecified	-	7	-	7	7	(249)
<b>Balance at December 31, 2019</b>	<b>88,121</b>	<b>69</b>	<b>-</b>	<b>69</b>	<b>88,190</b>	<b>1,412</b>
Balance at January 1, 2018	63,687	126	1,628	1,755	65,442	1,294
Transfers by loss of control (3)	-	-	(1,428)	(1,428)	(1,428)	1,428
Sales and transfers of oil and gas, net of production cost	(31,429)	(76)	(844)	(921)	(32,350)	(369)
Development cost incurred	9,685	32	229	261	9,946	252
Net change due to purchases and sales of minerals in place	(4,773)	-	-	-	(4,773)	(1,770)
Net change due to extensions, discoveries and improved recovery related costs	11,284	123	-	123	11,407	-
Revisions of previous quantity estimates	10,688	-	-	-	10,688	50
Net change in prices, transfer prices and in production costs	72,662	44	383	427	73,089	1,740
Changes in estimated future development costs	1,857	(76)	(118)	(194)	1,664	(93)
Accretion of discount	6,369	19	150	169	6,537	129
Net change in income taxes	(28,910)	(4)	-	(4)	(28,914)	(489)
Other - unspecified	-	(4)	-	(4)	(4)	119
<b>Balance at December 31, 2018</b>	<b>111,121</b>	<b>185</b>	<b>-</b>	<b>185</b>	<b>111,305</b>	<b>2,290</b>

(1) Includes the amount of US\$ 1,770 millions related to assets classified as held for sale in 2017 (January of 2018).

(2) Includes the amount of US\$ 1,675 millions related to PO&G assets classified as held for sale in 2018. Includes the amount of US\$ 1,047 millions related to PO&G assets classified as held for sale in 2019.

(3) Amounts transferred from consolidated entities to equity method investees, as the Company concluded the operation that has resulted in the formation of a joint venture company ("JV"), of which Murphy Exploration & Production Company ("Murphy") has 80% stake and Petrobras America Inc ("PAI") 20% stake.

Apparent differences in the sum of the numbers are due to rounding off.



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