

Annual Report and Form 20-F **2021**



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, 2021
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)

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(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 Depository 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 New York Stock Exchange*
Petrobras American Depository Shares (as evidenced by American Depositary Receipts), each representing two Preferred Shares		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
5.500% Global Notes due 2051, 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 Depository 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, 2021 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, in 2020 we altered the structure and order of the disclosure in our annual report and Form 20-F. In this annual report and Form 20-F for the year ended December 31, 2021 (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. We have selected the U.S. dollar as our presentation currency to facilitate a more direct comparison to other oil and gas companies.

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.

The 2021 GHG emissions performance results presented in this annual report will be subject to third party audit, and although we do not expect significant differences, some changes may occur.

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 and at our website at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to 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:

ACL	<i>Ambiente de Comercialização Livre</i> (Free Marketing Environment). 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.
ACR	<i>Ambiente de Comercialização Regulado</i> (Regulated Marketing Environment). 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.
ADR	American Depository Receipt.
ADS	American Depository Share.
AIP	Production Individualization Agreement (AIP, for Acordo de Individualização da Produção). The AIP occurs in situations where the reservoirs extends beyond the areas granted or contracted, as regulated by the ANP.
Amex Oil	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.
ANEEL	The <i>Agência Nacional de Energia Elétrica</i> (Brazilian Electricity Regulatory Agency)
ANP	The <i>Agência Nacional de Petróleo, Gás Natural e Biocombustíveis</i> (Brazilian National Petroleum, Natural Gas and Biofuels Agency) is the federal agency that regulates the oil, natural gas and renewable fuels industry in Brazil.
ANTAQ	The <i>Agência Nacional de Transportes Aquaviários</i> (Brazilian National Agency of Waterway Transportation).
API	Standard measure of oil density developed by the American Petroleum Institute.
APS	The <i>Associação Petrobras de Saúde</i> (Petrobras Health Association), a non-profit association that operates our new supplementary health care plan (Saúde Petrobras) since 2021.

B3	<i>Brasil, Bolsa, Balcão</i> , the Brazilian Stock Exchange.
BioQav	Aviation turbine fuel used to power aircraft, produced from several biomass sources in different production processes, also known as "biojet", "biokerosine" or "SAF" (synthetic aviation fuel) and named by the ANP as "Alternative Jet Fuel", which must be added to conventional 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.
Biofuel	Any fuel derived from the conversion of biomass as raw material (vegetable oils, algae material, crops or animal wastes etc.) and/or produced through biological processes, such as fermentation and others. Biofuels are considered renewable sources of energy.
Barrels	Standard measure of crude oil volume.
BNDES	<i>Banco Nacional de Desenvolvimento Econômico e Social</i> (Brazilian National Development Bank).
Braskem	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.
Brazilian Treasury	The <i>Tesouro Nacional</i> (Brazilian National Treasury) is a Secretariat of the Ministry of Economy, responsible, in Brazil, for financial programming, accounting, management of federal public debt and financial and securities assets and the relationship with states and municipalities. 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.
Brent Crude Oil	A major trading classification of light crude oil that serves as a major benchmark price for commercialization of crude oil worldwide.
CADE	<i>Conselho Administrativo de Defesa Econômica</i> (Administrative Council for Economic Defense).
Câmara de Arbitragem do Mercado	An arbitration chamber governed and maintained by B3.
Capital Expenditures or	Capital expenditures based on the cost assumptions and financial methodology adopted in our strategic plans, which includes acquisition of intangible assets and property, plant

"CAPEX"	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, pre-operating charges, purchase of property, plant and equipment on credit and borrowing costs directly attributable to works in progress.
CBA	<i>Acordo Coletivo de Trabalho</i> (Collective Bargaining Agreement).
CCUS	Carbon Capture, Utilization and Storage.
CEO	Chief Executive Officer.
CFO	Chief Financial Officer.
Central Bank of Brazil	The <i>Banco Central do Brasil</i> .
Central Depositária	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.
CGPAR	The <i>Comissão Interministerial de Governança Corporativa e de Administração de Participações Sociedades da União</i> (Interministerial Commission on Corporate Governance and the Administration of Corporate Holdings of the Federal Government) is the Brazilian Government institution that establishes procedures related to governance of state-owned companies.
CGU	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.
CMN	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.
CNODC	CNODC Brasil Petróleo e Gás Ltda.
CNOOC	CNOOC Petroleum Brasil Ltda.
Condensate	Hydrocarbons that are in the gaseous phase at reservoir conditions but condense into liquid as they travel up the wellbore and reach separator conditions.

CONAMA	The <i>Conselho Nacional do Meio Ambiente</i> (National Council for the Environment in Brazil).
CNPE	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.
CVM	The <i>Comissão de Valores Mobiliários</i> (Brazilian Securities and Exchange Commission).
D&M	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.
Deepwater	Between 300 and 1,500 meters (984 and 4,921 feet) deep.
Depository	JPMorgan.
Distillation	The process by which liquids are separated or refined by vaporization followed by condensation.
DoJ	The U.S. Department of Justice.
E&P	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.
ESG	Environmental, Social and Governance.
Eletrobras	Centrais Elétricas Brasileiras S.A.
Exchange Act	Securities Exchange Act of 1934, as amended.
EWT	Extended well test.
Fitch	Fitch Ratings Inc., a credit rating agency.
Focus Survey	The Central Bank of Brazil carries out the Focus Survey compiling forecasts of about 140 banks, asset managers and others institutions.
FPSO	Floating production, storage and offloading unit.

G&P	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.
GASLUB Cluster (formerly COMPERJ)	Located in southeastern Brazil (Itaboraí, in the state of Rio de Janeiro), the GASLUB Cluster is comprised of the GASLUB Itaboraí UPGNs and other underlying utilities.
Gaspetro	Petrobras Gás S.A– GASPETRO is our subsidiary, in which we have a 51% equity interest and a holding company with equity interests in 18 Brazilian local gas distribution companies, with Mitsui holding the remaining 49% interest.
GHG	Greenhouse gas.
GSA	Long-term Gas Supply Agreement entered into with the Bolivian state-owned company Yacimientos Petroliferos Fiscales Bolivianos.
GTB	Gás Transboliviano S.A. is a company operating in the natural gas transportation industry, responsible for the administration and operation of the 557 km gas pipeline system in the Bolivian section of the Bolivia-Brazil gas pipeline ("GASBOL"), with an installed capacity of 30 million m ³ /d. GTB is connected to TBG on the Bolivia-Brazil border in the state of Mato Grosso do Sul.
HCC or Hydrocracking	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.
HDT or Hydrotreating	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.
HSE	Health, Safety and Environment.
IASB	International Accounting Standards Board.
IBAMA	The <i>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis</i> (Brazilian Institute of the Environment and Renewable Natural Resources).

Ibovespa or IBOV	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.
IEA	<i>Acordo Individual de Trabalho</i> (individual employment agreement).
IFRS	International Financial Reporting Standards.
Inovar-Auto	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.
IMO	International Maritime Organization.
IOF	<i>Imposto sobre Operações Financeiras</i> (Brazilian taxes over financial transactions).
IPCA	The <i>Índice Nacional de Preços ao Consumidor Amplo</i> (National Consumer Price Index).
JPMorgan	JPMorgan Chase Bank, N.A.
Lava Jato	<i>Operação Lava Jato</i> , as detailed in “Risks – Risks Factors” and “Legal and Tax – Legal Proceedings – Lava Jato Investigation” in this annual report.
LIBOR	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.
LNG	Liquefied natural gas.
LPG	Liquefied petroleum gas, which is a mixture of saturated and unsaturated hydrocarbons, with up to five carbon atoms, used as domestic fuel.
MME	The <i>Ministério de Minas e Energia</i> (Ministry of Mines and Energy) of Brazil.
Moody's	Moody's Investors Service, Inc., a credit rating agency.
ME	The <i>Ministério da Economia</i> of Brazil (Ministry of Economy, former MPDM – <i>Ministério do Planejamento, Desenvolvimento e Gestão</i>).
Natural Gasoline (C5+)	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.

Nelson complexity index (NCI)	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, more 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 hydrotreaters or coking units, do increase complexity. The NCI is measured on a scale of one to 20, with high numbers corresponding to more complex and expensive refineries.
NGL	The liquid resulting from the processing of natural gas and containing the heavier gaseous hydrocarbons.
NYSE	The New York Stock Exchange.
OCF	Operating Cash Flow (net cash provided by operating activities).
Oil	Crude oil, including NGLs and condensates.
Oil Products	Produced through processing at refineries such as diesel, gasoline, liquid fuel, LPG and other products.
ONS	The <i>Operador Nacional do Sistema Elétrico</i> (National Electric System Operator) of Brazil.
OPEC	Organization of the Petroleum Exporting Countries.
Operating income (loss)	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.
Organic Reserves Replacement Ratio or Organic RRR	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.
OSRL	The Oil Spill Response Limited.
OTC	Offshore Technology Conference.
Petrochemicals	Chemicals obtained in petrochemical industries such as ethane, propene, benzene, xylenes, polypropylene, polyethylene and others.

PAI	<i>Programa de Aposentadoria Incentivado</i> (Incentive Retirement Program).
PDV	<i>Programa de Desligamento Voluntário</i> (Voluntary Severance Program).
Petros	Fundação Petros de Seguridade Social, Petrobras' employee pension fund.
Petros 2	Petrobras' sponsored pension plan.
PFLOPS	One PFLOPS equals the processing capacity of a quadrillion mathematical operations per second.
PGF	Petrobras Global Finance B.V.
PifCo	Petrobras International Finance Company S.A.
PLR	The <i>Participação nos Lucros e Resultados</i> (Profit Sharing Program) is a remuneration model based on the division of profits with our employees. Our PLR is governed by Brazilian Law 10,101/2000 and follows the guidelines of the Secretariat of Coordination and Governance of State-Owned Companies ("SEST"). These annual guidelines define various aspects of this type of reward, such as format, flow, governance, financial and remuneration limits.
PLSV	Pipe laying support vessel.
PPP	The <i>Prêmio por Performance</i> (Performance Award Program) is part of our Variable Remuneration Program ("PRV"), which is also comprised of the Profit Sharing Program ("PLR") and is aligned with our strategic objectives, motivating everyone involved to achieve the results and goals defined by management.
Post-salt reservoir	A geological formation containing oil or natural gas deposits located above a salt layer.
PP&E	Property, plant and equipment.
PPSA	Pré-Sal Petróleo S.A.
Pre-salt Polygon	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.

Pre-salt reservoir	A geological formation containing oil or natural gas deposits located beneath a salt layer.
PREVIC	The <i>Superintendência Nacional de Previdência Complementar</i> (National Supplementary Pension Authority).
Proved reserves	Consistent with the definitions of 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.
Proved developed reserves	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.
Proved undeveloped reserves	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.
PTAX	The reference exchange rate for the purchase and sale of U.S. dollars in Brazil, as published by the Central Bank of Brazil.

R&D	Research and development.
RNEST	The <i>Refinaria Abreu e Lima</i> (Abreu e Lima Refinery).
Refining, Transportation and Marketing	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.
Reserves Replacement Ratio or RRR	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.
Reserves to production ratio or R/P	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.
S&P	Standard & Poor's Financial Services LLC, a credit rating agency.
Saúde Petrobras	Our new health care plan, since 2021, which replaced the AMS (<i>Assistência Multidisciplinar de Saúde</i>).
SEC	The United States Securities and Exchange Commission.
SELIC	The Central Bank of Brazil base interest rate.
SEST	The <i>Secretaria de Coordenação e Governança das Empresas Estatais</i> (Secretariat of Coordination and Governance of State-Owned Companies).
Sete Brasil	Sete Brasil Participações, S.A.
Shell	Shell Brasil Petróleo Ltda.
Synthetic oil and synthetic gas	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.
SPE	Society of Petroleum Engineers.
SS	Semi-submersible platform.

Strategic Plan	2022-2026 Strategic Plan
TAG	Transportadora Associada de Gás S.A.
TCU	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.
TBG	Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. is a company operating in the natural gas transportation industry, in which we have a 51% equity interest, 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 ³ /d. Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. is connected to GTB, which permits access to Bolivian natural gas and is connected to Nova Transportadora do Sudeste S.A.'s ("NTS") gas pipeline, which permits access to Brazilian natural gas.
TJLP	The <i>Taxa de Juros de Longo Prazo</i> (Brazil long-term interest rate) is set quarterly by the CMN (as defined above). The rate is used as the benchmark rate for loans from the BNDES to companies.
TotalEnergies	Total E&P do Brasil Ltda.
Transfer of Rights Agreement	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 "Legal and Tax — Material Contracts" in this annual report.
Transfer of Rights Agreement (ToR) Surplus	Volume that exceeds what has been contracted under the Transfer of Rights agreement in specified pre-salt areas. See "Material Contracts" in this annual report.
Transpetro	Petrobras Transporte S.A.
TRI	Total recordable injury per million man-hour frequency rate.
Ultra-deepwater	Over 1,500 meters (4,921 feet) deep.
UPGN	<i>Unidade de Processamento de Gás Natural</i> (Natural-gas processing Units). 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.
Vibra (Formerly "BR Distribuidora")	Vibra Energia, S.A.
YPFB	Yacimientos Petroliferos Fiscales Bolivianos.

About Us



About us

We are a Brazilian company with 45,532 employees (including subsidiaries in Brazil and abroad) committed to being the best energy company in terms of value creation, with a focus on oil and gas, sustainability, 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\$69.2 billion as of December 31, 2021. 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 since we started exploring Brazilian offshore basins decades ago, following our first subsea well in the Campos Basin in 1971.



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 2401

Corporate and investor relations websites: www.petrobras.com.br and www.petrobras.com.br/ir.

The information available on our website is not and shall not be deemed to be incorporated by reference to 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. 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 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 are themselves 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 of 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 the domestic demand, we process natural gas derived from our onshore and offshore production (mainly from fields of 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.

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" or "RT&M"):** 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 our associate Vibra Energia (formerly BR Distribuidora) until July 2021 (when we sold our remaining interest in this company), and the business for the distribution of oil products abroad (in South America).

For further information regarding our business segments, see Notes 12 and 30 to our audited consolidated financial statements, as well as "Operating and Financial Review and Prospects" in this annual report.

Until February 2021 we had activities in eight countries besides Brazil (i.e., Argentina, Bolivia, Colombia, Uruguay, the U.S., Netherlands, United Kingdom and Singapore). In February 2021 we ended our operational activities in Uruguay with the sale of our shares in the distribution company, and, in July 2021, we ended our trading activities in the United Kingdom and have concentrated our European activities in the Netherlands only. As a result of these changes, as of March 2022 we have activities in six countries besides Brazil (i.e., Argentina, Bolivia, Colombia, the U.S., the Netherlands, and Singapore).

In Latin America, our operations include upstream, marketing, and retail services. In North America, we produce oil and gas through a joint venture. We have controlled companies that support our trading and financial activities in Rotterdam, Houston, and Singapore. These companies act as complete and active trading desks for markets worldwide, and are responsible for market intelligence and trading of oil, oil products, natural gas, commodity derivatives and shipping.

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	100.00%	—
Petrobras Logística de Exploração e Produção S.A. – PB-LOG	Brazil	100.00%	—
Petrobras Gás S.A. - Gaspetro	Brazil	51.00%	Mitsui Gás e Energia do Brasil Ltda (49%)
Petrobras Biocombustível S.A.	Brazil	100.00%	—
Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. – TBG	Brazil	51.00%	BBPP Holdings Ltda. (29%) YPFB Transporte S.A.

			(19.88%) Corumba Holding S.À.R.L. (0.12%)
Procurement Negócios Eletrônicos S.A.	Brazil	72.00%	SAP Brasil Ltda. (17%) Accenture do Brasil S.A. (11%)
Araucária Nitrogenados S.A.	Brazil	100.00%	—
Termomacaé S.A.	Brazil	100.00%	—
Termobahia S.A.	Brazil	98.85%	Petros (1.15%)
Baixada Santista Energia S.A.	Brazil	100.00%	—
Petrobras Comercializadora de Energia S.A. – PBEN	Brazil	100.00%	—
Fundo de Investimento Imobiliário RB Logística – FII	Brazil	99.15%	Pentágono SA DTVM (0.85%)
Petrobras Comercializadora de Gás e Energia e Participações S.A. – PBEN-P	Brazil	100.00%	—
Fábrica Carioca de Catalisadores S.A. – FCC ⁽¹⁾	Brazil	50.00%	Albemarle Brazil Holding Ltda. (50%)
Ibiritermo S.A. ⁽¹⁾	Brazil	50.00%	Edison S.p.A (50%)
Petrobras International Braspetro – PIB BV	Abroad	100.00%	—
Braspetro Oil Services Company – Brasoil	Abroad	100.00%	—
Refinaria de Mucuripe S.A. ⁽²⁾	Brazil	100.00%	—
Refinaria de Canoas S.A. ⁽²⁾	Brazil	100.00%	—
Paraná Xisto S.A. ⁽²⁾	Brazil	100.00%	—
Refinaria de Manaus S.A. ⁽²⁾	Brazil	100.00%	—
Associação Petrobras de Saúde ⁽³⁾	Brazil	93.47%	Transpetro (6.09%) TBG (0.26%) Pbio (0.13%) Termobahia (0.05%)

(1) Joint operations.

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

(3) A non-profit association that operates our new supplementary health care plan (Saúde Petrobras) since 2021.

For an extended 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 29 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—Exploration and Production—Overview” for more details.

2021 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 US dollars considering the exchange rate prevailing at the date of the Board of Directors' approval for anticipations and the year-end rate for the annual complementary dividends. 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 2021 showed a slight improvement compared to the already historic TRI result of 2020.

4) Sum of oil (or oil products) spills volumes that were individually greater than 1 barrel, that reached water bodies or non-waterproofed soil. 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. Spills originated by illegal taps were not accounted.

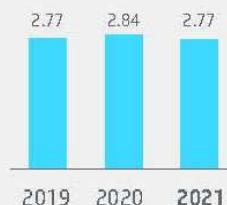
5) In 2021, emissions were higher than previous two years due to atypical thermolectric dispatch in a year of water scarcity. It is circumstantial and does not affect the commitment to reduce absolute operational emissions.

2021 HIGHLIGHTS

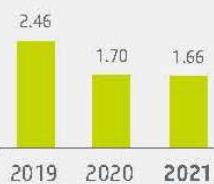
Operational Indicators



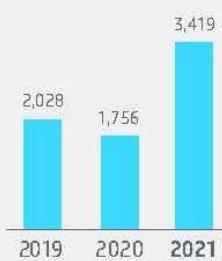
Oil and Natural Gas Production
(Millions boed)



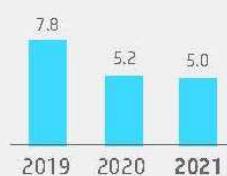
Refining Cost
(US\$/bbl)



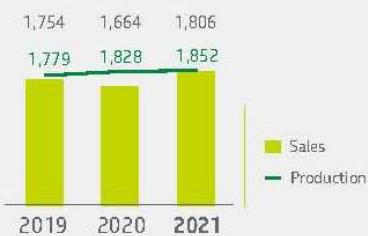
Power Generation
(Average MW)



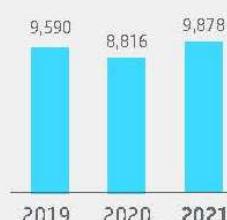
Lifting Cost - Brazil¹
(USD/Boe)



Brazilian Sales and Oil Products Production
(Mbbl/d)



Proved Reserves
(Millions boe)



Carbon Intensity - Refining
(Kg CO₂e/CWT)



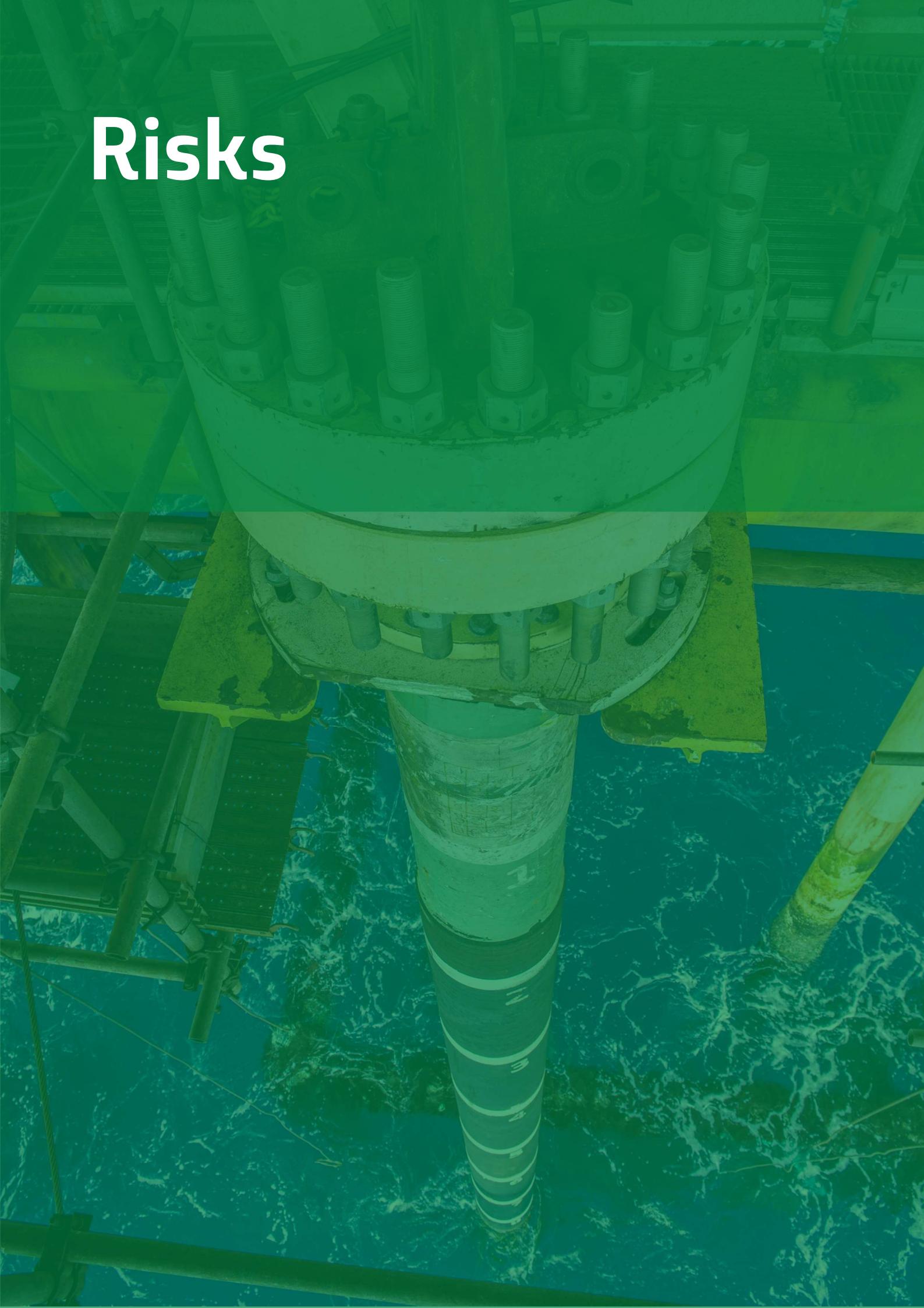
Carbon Intensity - E&P
(Kg CO₂e/boe)



1) Does not include leases.

2) Revised value after third-party certification completed on July 21, from 15.8 Kg CO₂e/boe to 15.9 Kg CO₂e/boe.

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.



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.

Activities related to the oil and gas business present high risks, generally because they involve high temperatures and pressures. Our activities, particularly those in deep and ultra-deepwaters and refining, present several risks, such as oil and product leakage, fires and explosions in refineries and exploration and production units, including platforms, ships, pipelines, terminals and losses of containment in dams, among others in assets owned or operated by us. These events can occur due to technical failures, human errors or natural disasters, among other factors. The occurrence of one of these events, or other related incidents, may result in health impacts on our workforce and/or surrounding communities, fatalities and environmental damage. They can also cause material damage, production losses, financial losses and, in certain circumstances, liability in civil, labor, criminal, environmental and administrative proceedings. As a result, we may incur expenses related to mitigation, recovery and/or compensation for the damages caused.

We are also exposed to corporate security risks from acts of intentional interference by third parties in our pipelines and nearby areas, especially illegal taps (thefts) of oil and oil products, mainly in the states of São Paulo and Rio de Janeiro. If this interference continues, it may result in accidents of small or large proportions, including leaks or damage in our facilities, increase risk to the people and the communities around these facilities, which may affect the continuation of our operations, cause damage to our image and lead to payment of fines and indemnities to the parties affected, all of which can negatively impact our

results. For more information, please see "Our Business – Exploration and Production" and "Environment, Social and Governance" in this annual report.

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 market 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 market, 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.

We have 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 divesting some of our shareholding interests in companies and assets in the gas transportation and distribution segments and to renounce some of the contracted transportation network capacity (of injection and withdrawal volumes), in furtherance of creating 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, as well as harm our image and reputation.

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 of IT systems by 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 Brazilian 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.

Personal data currently in our possession largely includes our employees' data, such as health information, but also the data of clients and visitors to our facilities. Failure to comply with the requirements established by the LGPD may result in administrative sanctions, including warnings, fines, publication of the infraction, blocking access to personal data and elimination of personal data.

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 and gas 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.

There are also risks related to potential delays in the execution of oil and gas projects, which could result in the mismatch of required dates between upstream and downstream projects (e.g., delay in onshore infrastructure, impacting offshore flow of oil and gas, and onshore gas transportation). Additionally, we face risks associated with unplanned downtime events of critical assets (such as the natural gas and LNG chain) that can also impact offshore and onshore flow and may compromise the continuity of our business production chain.

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. Although our decommissioning plans have been developed in compliance with applicable law, these plans may face scrutiny from our stakeholders or fail to meet market demand or expectations with respect to environmental, social and governance practices. As a result, our image and reputation may be adversely affected, which could in turn have an adverse effect on our business, financial condition and results of operations.

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 legislation, 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 “— 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” 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.

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. With the aggravation of climate change and advances in agreements and regulations, if we do not prepare for the new global challenges we may incur fines and/or higher taxes, impacting our cash flow, and lose competitiveness, diminishing shareholder value. Changes in environmental conditions could potentially impact some of the conditions more crucial to our assets, such as water availability for our refineries and thermoelectric plants and wave, wind and ocean current patterns for our offshore platforms.

More stringent environmental regulations, including policy-driven responses to climate change such as regulated greenhouse gas (GHG) emission and others mitigation responses, can result in a potential increase in our operating costs and reduce production. The Brazilian federal legislature is in the final stages of considering the establishment of a regulatory framework for the adoption of a carbon-pricing instrument to reduce GHG in Brazil.

Recent increases in numbers of climate litigation around the world highlight this risk. Environmental laws that may be implemented in the future could increase litigation risks and have a material adverse effect on us.

A growing number of investors seek to align their investments with medium and long-term climate policies. The increased perception of climate risks by investors, together with greater regulatory restrictions related to carbon intensive sectors, can lead to greater difficulty in accessing capital and increased costs. Investors based in countries that have committed to the Paris Agreement with stronger decarbonization targets tend to experience even stronger pressures in their investment decisions.

Society's increasing concerns over climate change may have negative impacts on the demand for our products and services, such as a reduction in fossil fuel consumption due to the energy transition. The global energy matrix may accelerate towards a more renewable profile, with the inclusion of products that substitute fossil fuels and the increased use of electricity for urban mobility.

We foresee increasing pressure to develop and utilize technological options to improve the operational emissions performance in order to keep pace with the demands of a low-carbon world. Risk arises from the lack of investment and insufficient performance in technologies and products that could be applied to our business. If we are not able to reduce our carbon emissions and demonstrate this commitment, we could be exposed to a material adverse effect on our earnings and financial condition.

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 and ultra-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 impact our ability to continue our operations.

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 adequately allocate and train our workforce, 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, product quality and capability 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 to maintain responsible relations with the communities where we operate and to be diligent with suppliers. 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, 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 decommissioning – 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 logically 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. Climate change and related impacts may heighten this risk. 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 temporarily 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 significant decline in international crude oil and gas prices, 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 and access new technologies 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 to reduce the carbon intensity of our emissions and new market trends, play a key role in increasing our long-term competitiveness. If we are no longer at the technological frontier for oil and gas exploration in ultra-deepwaters, our performance could weaken relative to other companies in the sector, putting our long-term strategy at risk.

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 according to 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, for example: (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 ourselves, 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, with possible financial losses.

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) 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 and legislation imposed by the Brazilian government, as our controlling shareholder, could affect these pricing decisions. 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, a new management team or Board of Directors may propose changes to our pricing policies, including a decision that such policies may not seek for alignment with international price parity. See "—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." We cannot guarantee that our way of setting prices will not change in the future. Changes to our fuel pricing policy could have a material adverse impact on our businesses, results, financial condition, and the value of our securities.

Market fluctuations, related to political instability, acts of terrorism, armed conflict and war in various regions of the world, may have a material adverse effect on our business.

Geopolitical risk factors have recently become more prominent in the world. As a result of the ongoing military conflict involving Russia and Ukraine, the price of WTI and natural gas prices have remained extremely volatile. Such military conflict and the effect of the resulting economic sanctions imposed on Russia and certain Russian citizens and enterprises could have a negative effect on the global economy, including Brazil. As of the date of this annual report, we are unable to predict the extent of this conflict and

its impacts on our business. Potential supply chain disruptions, as well as high oil and natural gas prices, could have an adverse effect on the demand for our goods and services and the price of our securities.

Other events that may lead to market fluctuations could affect, directly or indirectly, the oil industry, which could negatively impact our business and result in substantial losses.

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, 2021, 87.3% of our finance debt was denominated in currencies other than the *real*. A further depreciation of the *real* against 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. 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, 2021, 37.3% 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 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.

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

With respect to health care benefits, 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.

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, administrative and arbitration 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, administrative and arbitration 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.

Potential adverse developments in the Lava Jato investigation or other 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.

The Lava Jato investigation is still in progress by Brazilian authorities and additional relevant information affecting our interests may come to light. Adverse developments 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 arising out of Lava Jato, or other possible noncompliance with the U.S. Foreign Corrupt Practices Act or other laws, 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.

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 concerning the Lava Jato investigation. 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. In 2018, more restrictive air quality standards were defined by federal and state environmental agencies, which may increase the demands for implementation of technological improvements that provide the reduction of air pollution on industrial units like refineries, electric power plants and terminals 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. It is possible that our efforts to comply with such regulations will result in increased expenditures, and failure to comply with

such regulations could cause damage to our public image and lead to payment of fines and indemnities to the parties affected.

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), 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 ANEEL, ANP, ANTAQ and CADE. Issues such as market concentration across the natural gas and downstream value chains, local content requirements, procedures for the unification of areas, definition of reference prices for the calculation of royalties and governmental participation, oil products specifications, rules related to the temporary and definitive abandonment of wells, among others, are subject to a regulatory regime overseen by Brazilian regulatory agencies.

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.

According to our Related Party Transactions Policy, transactions with related parties must be entered into on market terms, executed in the best interest of the company, without conflict of interest and in compliance with the necessary requirements: competitiveness, compliance, transparency, equity and reciprocity. Decision processes surrounding such transactions must be objective and documented. Further, we must comply with rules related to 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 or where no contractual or legal obligation to provide those services or products exists. See "Legal and Tax – Legal Proceedings" in this annual report. Although we typically appeal these decisions to higher courts, a requirement that we provide 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 or changes in our management team, which may further impact the implementation of our business strategy, including our Strategic Plan, Pricing Policy, Dividend Policy 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 on terms that may have an adverse effect on our results and financial condition.

For further information relating to potential changes to the composition of our Board of Directors, see "Management and Employees – Management – Board of Directors" in this annual report.

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 several factors, such as:

- 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 in early 2020, 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 – 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 depositary, 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 depositary as to voting will depend on the timing and procedures for providing instructions to the depositary, 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 – 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 coordinated by a corporate area, 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.

For further information regarding our revised business risk management policy, please visit our website at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to 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 36 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\$2.38 billion for refineries and US\$2 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.

Furthermore, throughout the year we receive surveys from the insurance market that evaluates the operational risks of our facilities and make recommendations. In general, the risk ratings of our assets are at or above the market average. In 2021, we had remote surveys in 35 onshore and offshore units. Based on these surveys, last year we heeded more than 300 recommendations that improve the safety of our company.

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\$325 million depending on the country.

Our Business

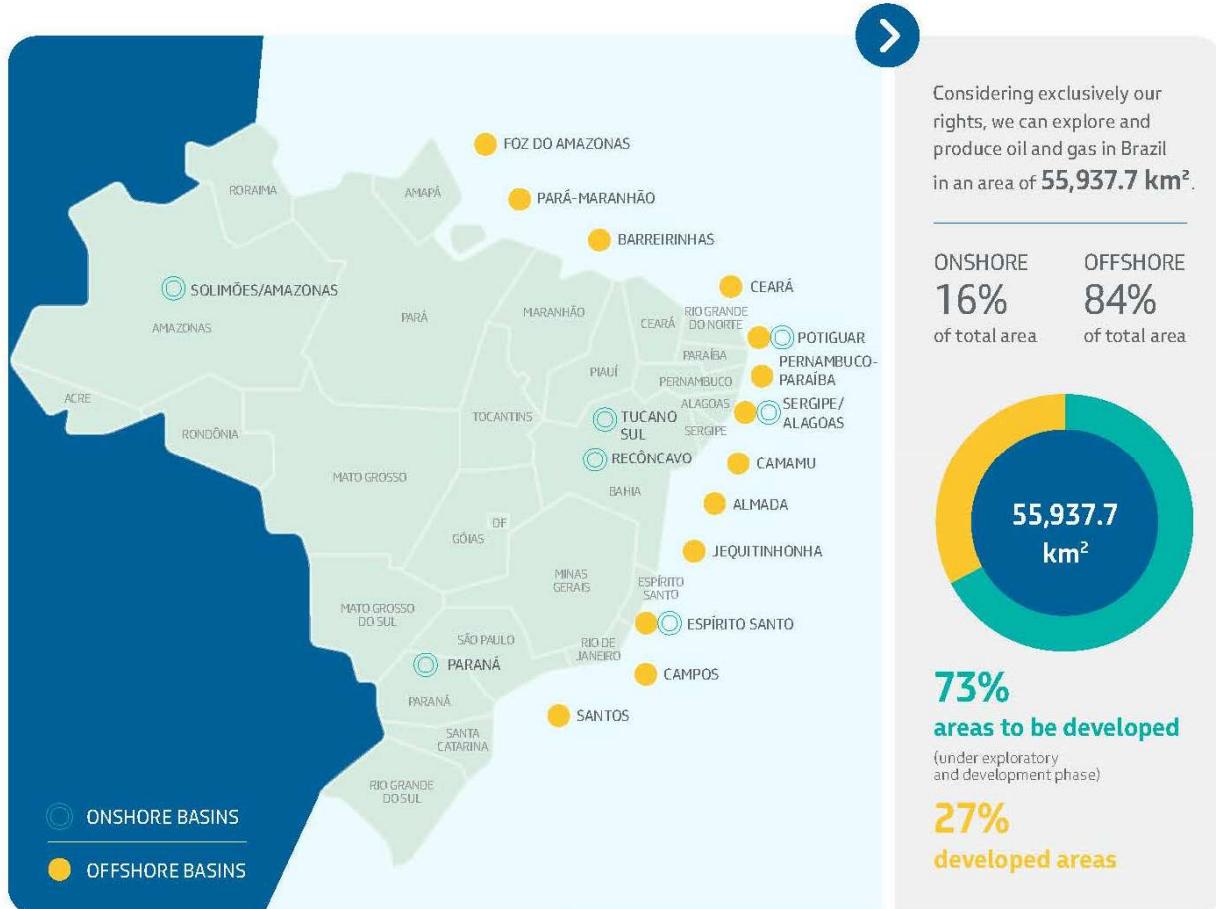
An aerial photograph of an offshore oil or gas platform. The structure is built on a central steel lattice tower with multiple levels of walkways, ladders, and various industrial equipment. A large yellow cylindrical storage tank is visible on the left side. The platform extends from the tower through several levels of walkways and stairs down to the water's edge. The surrounding ocean is a dark blue-green color with some white-capped waves near the shore. The sky is clear and light blue.

Exploration and Production

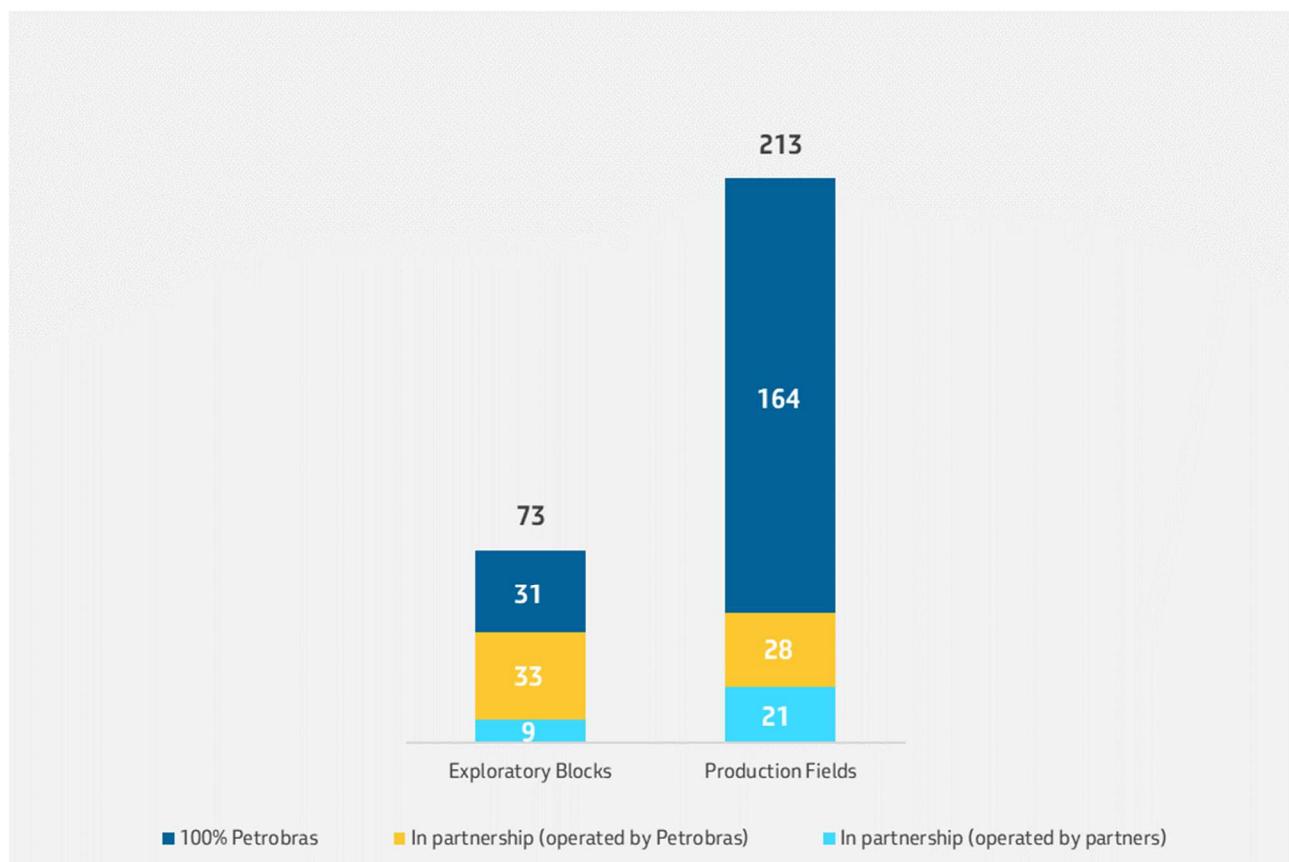
Overview

Our oil and natural gas exploration and production activities are the major components of our 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 95% of our total production in 2021. 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 91% of our worldwide blocks and fields, 99% of our global oil production and 99.5% of our oil and natural gas reserves.



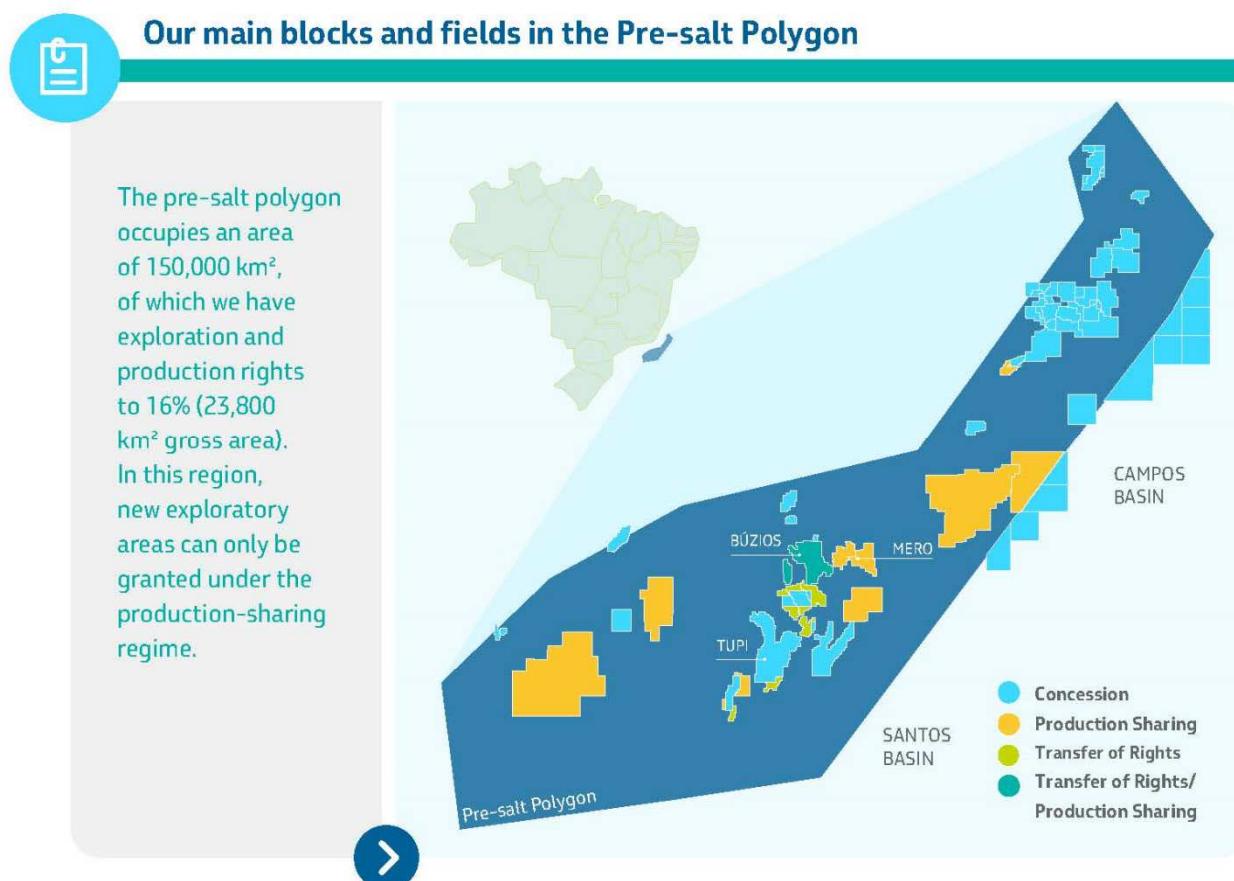
We have 286 blocks and fields in exploration and production including 91 consortia with other oil and gas companies. From the 286 blocks and fields, 262 are under Concession Agreements, 14 are under Production Sharing Agreements and 10 are regulated by Transfer of Rights Agreements.

EXPLORATION AND PRODUCTION BLOCKS AND FIELDS (Number of blocks and fields)

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%, TotalEnergies 20%, CNOOC 10% and CNOOC 10%), Berbigão, Sururu and Oeste de Atapu (all with Petrobras 42.5%, Shell 25%, TotalEnergies 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%), Tartaruga Verde (Petrobras 50%, Petronas 50%) and Búzios (Petrobras 92.612%, CNOOC 3.694% e CNOOC 3.694%). We also operate these fields in the Pre-salt Polygon area.



The Campos Basin is one of Brazil's main and most prolific oil and gas offshore basins. Its oil production started in the 1970's and although in decline, we have been able to mitigate the natural depletion of mature fields of the 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, on the other hand, are a growing source of production. Our pre-salt oil production started in 2008 in the Jubarte field.



We believe the Santos Basin is one of the most promising offshore exploration sites in the world, containing the southern and most prolific part of the pre-salt region. Our pre-salt activities in the Santos Basin began with the acquisition of blocks in 2000.

We currently have 19 pre-salt production units in the Santos Basin. With these units, we have been increasing the pre-salt oil production in the Santos Basin since its first oil production, in 2009.



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. 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 2021, our production of oil and gas in Argentina, including NGL, was 7.9 mboed.

In **Bolivia**, we produce gas and condensate primarily in 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 2021, our production of oil and gas in Bolivia, including NGL, was 24.2 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

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 2021, our 20% participation represents a production of 10.4 mboed, including NGL.

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



Main Assets

	2021	2020	2019
Exploration and Production			
Production wells (oil and natural gas) ⁽¹⁾	5,042	5,646	7,021 ⁽⁴⁾
Floating rigs	18	20	16
Operated platforms in production ⁽²⁾	57	67 ⁽³⁾	107

(1) Includes the total amount of wells of our equity method investees (50, 100 and 164 wells in 2021, 2020 and 2019, respectively).

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

(3) Does not include mothballed, non-producing and platforms in fields operated by 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. Bidding 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.

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 2019, we acquired two new offshore exploratory blocks, with a total area of 5,800 km². In the Pre-salt Polygon, we acquired one area under the production sharing regime, in partnership with CNOOC. 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 CNOOC 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.

In 2021, we acquired the exploration and production rights of the surplus volumes of the Transfer of Rights from the Atapu and Sepia offshore fields in the 2nd Round Transfer of Rights under the Production Sharing Regime. With respect to the Atapu field, we acquired the rights to be the operator with 52.5% interest in its surplus volumes in partnership with Shell (25%) and TotalEnergies (22.5%). As to the Sépia field, we exercised our pre-emption right to be the operator with 30% interest in the acquisition of its surplus volumes. The other members of the consortium are TotalEnergies (28%), Petronas (21%) and Qatar Petroleum (21%).

Exploration Activities

As of December 31, 2021, we had 73 exploratory blocks (including 31 with 100% working interest), that had four discoveries in 2021. We serve as the operator in 33 of the exploration partnership blocks.

The table below breaks down our participation in exploration activities in 2021:

OUR PARTICIPATION IN EXPLORATION ACTIVITIES IN 2021

	Net exploratory area (km ²)			Exploratory blocks (number)			Evaluation plans (number)			Wells drilled (number)		
	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
Brazil	37,719	42,996	40,625	69	82	113	42	32	24	8	9	8
Other S. America	5,466	5,751	6,081	4	4	4	1	2	1	1	0	1
North America	0	0	0	0	0	0	0	0	0	0	0	0
Africa	0	0	0	0	0	0	0	0	2	0	0	0
TOTAL	43,185	48,747	46,706	73	86	117	43	34	27	9	9	9

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

In 2021, our exploratory efforts were concentrated on evaluating Brazil's southeast margin Pre-salt provinces, with the following highlights:

Santos Basin

Two wells drilled in the Búzios oil field confirmed presence of hydrocarbons. Additional studies are being conducted to provide better measurements and to assess the best use of these wells throughout the production phase.

The well located in the block of Aram, operated by us, resulted in hydrocarbon accumulation, with its drilling concluded in December 2021. Further evaluations of the field's extension and commerciality are being made, beginning with a well test planned for the second half of 2022.

Campos Basin

In the C-M-411 and C-M-346 blocks, both operated by us, two wildcat wells resulted in gas accumulations. The commerciality of both discoveries is currently being evaluated.

Two other prospects were drilled in the ultra-deepwaters of the Campos Basin, one in the block C-M-709, operated by us, and the second in the C-M-789, operated by ExxonMobil. While the first well did not result in a discovery, despite having found evidence of gas, the second one is still under additional studies to assess the economic viability of this area.

Espírito Santo Basin

In the deepwaters of the Espírito Santo Basin, in block ES-M-669, we successfully drilled one of the deepest wells in Brazil. The well also resulted in the discovery of gas, and additional studies are needed to assess the potential of this new province.

Statements of Commerciality

We submitted to the ANP statements of commerciality of the oil and gas accumulations located in the areas of the evaluation plans included in the BM-SEAL-4, BM-SEAL-4A, BM -SEAL-10 and BM-SEAL-11 concessions, located in the Sergipe-Alagoas Basin. Production is expected to start in 2026.

E&P Strategic Programs Highlights

We continue to develop the strategic program EXP100 that is designed to access and process 100% of the technical data available on the exploration projects, reducing uncertainties and costs by anticipating production development. This program aims to better estimate and predict geological properties through an integrated data platform, by using data science and high-performance computing capacity, that enable the application of more complex algorithms in the processing of large volumes of data. Several initiatives are already underway, with important advances in the integration and connection of data and technological solutions on the interpretation workflows, giving way to the development of new generation greenfields.

In addition, the PROD1000 strategic program is still in progress, and it aims to shorten the time between the discovery of the asset and the start of production (first oil), ultimately achieving greater return on invested capital.

As of 2021, the PROD1000 aims to place us in the first quartile of the oil & gas industry. Our efforts in such program are related to exploration and reservoir development integration, project design standardization, processes optimization and parallelization, faster procurement (bidding) and construction and assembly of the FPSO. The areas that currently contribute most to the reduction of project time are exploration, reservoir, surface and subsurface systems and procurement.

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. With respect to parallelization of processes, we have reduced the timing of activities between anchoring and connecting the first well in the Sépia project by more than 50%.

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.

We continue to achieve substantial cost optimizations related to project development through the implementation of strategic well construction programs, which enable the application of new drilling and completion technologies, innovative well configurations, campaign optimization and supply chain integration initiatives. As an example, in 2021 the average duration of well construction (total time for drilling plus completion) in the Búzios field was 99 days, which, combined with lower daily rates, allowed a 32% reduction in average construction cost in comparison to 2018 - two years before the implementation of our strategic well construction programs.

In addition, we reduced well connections costs in the Santos Basin pre-salt area by nearly 7.5% average 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, pipes and other components, especially those subsea components exposed to corrosion events. In 2021, we reduced production losses by 35% when compared to the forecast, through inspection campaigns on flexible pipes and engineering for life extension. We continue to implement initiatives such as expanding the supplier base to develop special tools and flexible pipes immune to the effect of corrosion.

As it relates to platforms, the High Capacity Design was finished in 2021 for the pre-salt new generation of FPSOs, with oil production capacity of 225 kbpd and gas processing of 423 mmcfd, representing the new generation of our platforms. This comes as a result of more than a decade of learning by us in the cycles of design, construction, start-up, and operation of production platforms in the pre-salt layer, with an increase in production capacity in relation to previous projects. The Búzios 9 FPSO bidding is using the High Capacity Design.

We invest in technological solutions combined with the transition to a low-carbon global economy, focusing on reducing greenhouse gas emissions.

TECHNICAL SOLUTIONS TO REDUCE GREENHOUSE EMISSIONS IN DEVELOPMENT PRODUCTION PROJECTS

	FPSO ALL ELECTRIC	OTHER TECHNOLOGIES IN FPSOS	HISEP® - SUBSEA HIGH PRESSURE SEPARATION SYSTEM
WHAT IS IT	 Floating production storage and offloading platform fully electrified. This configuration is more efficient and sustainable and allows using less fuel to generate energy.	 <ul style="list-style-type: none">— CCUS – Carbon capture, utilization and storage— Expansion of the use of the flare gas recovery system (FGRS)— Fugitive Emissions Control	 Technology to separate, pumping and reinject the produced CO ₂ -rich gas in a subsea environment.
OBJECTIVE	 To reduce emission of both greenhouse gases and other gases, such as Nitrogen Oxides – NOx. Studies have shown that this configuration increases operational efficiency and allows for a reduction of up to 20% of emissions compared to the configuration currently adopted.	 <ul style="list-style-type: none">— Separation and reinjection of CO₂— Gas flaring reduction— Methane emission reduction	 To accelerate production, reduce emissions, increase the recovery factor and economically viable new areas with high RGO and CO ₂ content
	The All Electric Design is expected to be finished until the end of 2022.	For more information on our actions to transition to low carbon see "Air Emissions and Transition to Low Carbon" in this annual report.	For more information about this technology see the Mero Field Box in this section.

In the last three years, we have installed several major systems, mainly in the Santos Basin pre-salt area, which helped to mitigate the Santos Basin's natural decline. In 2019, we started four new production systems: (i) the P-76 and (ii) P-77 platforms, located in the Búzios field; (iii) the P-67 platform, located in the Tupi field; and (iv) the P-68, located in the Berbigão and Sururu fields. In 2020, we started the P-70 platform, located in the Atapu field. In 2021, the FPSO Carioca started operations in the Sépia field. Those six new systems added 48 new wells (29 production wells and 19 injection wells) into our production systems.

In 2021, the P-70 platform, in the Atapu field, reached its full capacity of 161 kbpd, in less than 13 months. In addition, we started the gas flow in P-76 Platform, in the Búzios field, and in the P-69, in the Tupi field, enabling a better reservoir management and increased value generation.

In 2021, our producing platforms had a daily production of 2.22 million barrels of oil and 3,101.63 million cubic feet of natural gas (discounting the liquefied volume). In 2021, we owned 41 and leased 16 offshore producing platforms. Besides these offshore platforms, there are 2 platforms on fields operated by our partners and four storage and offloading units, totaling 63 active platforms.

In 2022, we will install the FPSO Guanabara, the first definitive system in the Mero field. This FPSO has the capacity to process 180 kbpd and 423.8 mmcfd of natural gas per day. We expect to install 15 new FPSOs in the next five years.

SYSTEMS INSTALLED SINCE 2010

Start up (year)	Basin	Field/Area	Production unit	Crude oil nominal capacity (bbl/d)	Gas nominal capacity (mmcfd)	Water depth (meters)	Fiscal regime	Main production source	Type
2021	Santos	Sépia	Carioca	180,000	211.9	2,200	Transfer of Rights/Concession	Pre-Salt	FPSO
2020	Santos	Atapu	Petrobras 70	150,000	211.9	2,288	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	247	1,980	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 3	Petrobras 76	150,000	247	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	247	1,950	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 2	Petrobras 75	150,000	247	2,015	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
2017	Santos	Tupi Sul Mero	Petrobras 66	150,000	211.9	2,150	Concession	Pre-Salt	FPSO
	Santos		Pioneiro de Libra	50,000	141.3	2,040	Production Sharing	Pre-Salt	FPSO



2016	Santos	Tupi Central Tupi Alto	Cidade de Saquarema Cidade de Maricá	150,000 150,000	211.9 211.9	2,120 2,120	Concession Concession	Pre-Salt Pre-Salt	FPSO FPSO
2015	Santos	Tupi	Cidade de Itaguaí	150,000	282.5	2,240	Concession	Pre-Salt	FPSO
2014	Santos	Sapinhoá	Cidade de Ilhabela	150,000	211.9	2,140	Concession	Pre-Salt	FPSO
	Santos	Tupi	Cidade de Mangaratiba	150,000	282.5	2,220	Concession	Pre-Salt	FPSO
	Campos	Roncador	Petrobras 62	180,000	211.9	1,560	Concession	Post-Salt	FPSO
2013	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
	Santos	Tupi	Cidade de Paraty	120,000	176.6	2,120	Concession	Pre-Salt	FPSO
2012	Santos	Sapinhoá	Cidade de São Paulo	50,000	76.6	2,140	Concession	Pre-Salt	FPSO
	Campos	Jubarte	Cidade de Anchieta	100,000	123.6	1,220	Concession	Pre-Salt	FPSO
	Campos	Marlim Sul Mexilhão	Petrobras 56 Mexilhão	140,000 20,000	211.9 529.7	1,645	Concession Concession	Post-Salt Post-Salt	SS Fixed
2010	Campos	Jubarte	Petrobras 57	180,000	70.6	1,260	Concession	Post-Salt	FPSO
	Santos	Tupi	Cidade de Angra dos Reis	100,000	176.6	2,150	Concession	Pre-Salt	FPSO
	Santos	Uruguá /Tambaú	Cidade de Santos	25,000	353.1	1,300	Concession	Post-Salt	FPSO
	Campos	Jubarte	Capixaba	110,000	113.0	1,473	Concession	Post-Salt	FPSO

MAIN SYSTEMS TO BE INSTALLED THROUGH 2026

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 2022	Santos	Mero 1	Guanabara	180,000	423,8	1.930	Production Sharing	Pre-Salt	FPSO
	Santos	Búzios 5	Almirante 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
	Campos	Marlim 2	Anna Nery	70,000	141,3	927	Concession	Post-Salt	FPSO
	Santos	Mero 2	Sepetiba	180,000	423,8	2,050	Production Sharing	Pre-Salt	FPSO
Expected 2023	Santos	Itapu	Petrobras 71	150,000	211,9	2,010	Transfer of Rights/Production Sharing	Pre-Salt	FPSO
	Campos	Parque das Baleias	Maria Quitéria	100,000	176,6	1,385	Concession	Pre-Salt	FPSO
	Santos	Búzios 7	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
Expected 2024	Santos	Búzios 6	Petrobras 78	180,000	254,3	2,030	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 8	Petrobras 79	180,000	254,3	1,700	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Mero 4	Alexandre de Gusmão	180,000	423,8	1,890	Production Sharing	Pre-Salt	FPSO

	Sergipe Águas Profundas	SEAP 1	Petrobras 81	120,000	353.1	2,400	Concession	Post-Salt	FPSO
Expected 2026	Santos	Búzios 9	Petrobras 80	225,000	423.8	2,100	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO
	Santos	Búzios 10	Petrobras 82	225,000	423.8	1,895	Transfer of Rights/Production Sharing/Concession	Pre-Salt	FPSO

Decommissioning

Decommissioning of oil and gas exploration and production systems means the disposal of the platform and the subsea system and the plug & abandonment of wells, upon authorization from regulatory bodies in accordance with applicable legal requirements.

In 2021, we obtained the approval from Brazilian regulatory bodies overseeing decommissioning plan to FPSO Capixaba, in the Jubarte field, and for the initial decommissioning activities of P-33, in the Marlim field, in the Campos Basin.

We performed the removal of the FPSO Piranema in April 2021, the three fixed platforms Units of Caçao field in June 2021 and the P-15 in December 2021. We completed the risers pullout of P-07 in February 2022.

With respect to well abandonments, we achieved substantial results in 2021 that allowed us to consolidate a 50% cost decrease in comparison with the average cost for the period from 2018-2020.

In 2022, we created an Executive Committee for Decommissioning, with the objective of monitoring the evolution of worldwide best practices and deliberating strategic guidelines to implement decommissioning projects.

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, special vessels, supply vessels and helicopters 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 17 rigs with this capacity as of December 31, 2021. 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, 2021 ⁽¹⁾

	2021		2020		2019	
	Leased	Owned	Leased	Owned	Leased	Owned
Brazil	18	0	20	0	18	0
Onshore	0	0	0	0	2	0
Offshore, by water depth (WD)	18	0	20	0	16	0
Jack-up rigs	0	0	0	0	0	0

Floating rigs	18	0	20	0	16	0
500 to 999 meters WD	1	0	0	0	0	0
1,000 to 1,999 meters WD	0	0	1	0	1	0
2,000 to 3,200 meters WD	17	0	19	0	15	0
Outside Brazil	0	0	0	0	1	0
Onshore	0	0	0	0	1	0
Offshore	0	0	0	0	0	0
Worldwide	18	0	20	0	19	0

(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, 2021, we had 14 PLSVs. Similarly to the rigs, we will adjust our fleet size as needed.

The supply of goods and transport of people is also important to achieve our exploration and production goals. By sea, we transport materials and chemical products. By air, we transport our most important assets: people. Both materials and people are transported on a daily basis so that the exploration and production of oil and gas is orchestrated in the most continuous way possible, maintaining the quality and level of services.

In 2021, we delivered more than two million tons of materials and transported over 650,000 passengers to our platforms all over the Brazilian coast. To accomplish these results, we also have a secure number of supply vessels (such as Platform Supply Vessels or "PSV") and helicopters. As of December 31, 2021, we had 67 PSV and 56 helicopters and both our fleets were sufficient to meet our needs.

Mero Field

Libra Block and Mero Field

In 2013, the consortium formed by us (Operator – 40%), Shell Brasil (20%), TotalEnergies (20%), CNODC (10%) and CNOOC Limited (10%) won the bid to explore and develop the Libra block for 35 years. The consortium also has the participation of the state-owned enterprise Pré-Sal Petróleo - PPSA, which operates as contract manager. On November 30, 2017, we announced the submission of the Declaration of Commerciality regarding oil accumulations in the northwestern portion of the Libra block, subsequently named Mero.

The Mero field is a world-class field located in the Santos Basin ultra-deepwaters, 180 km from the coast of Rio de Janeiro State and inside Brazilian pre-salt province. It has a high productivity reservoir filled with a large volume of high-quality oil. It is a thick reservoir (oil columns reaches 420 meters), with high productivity and filled with a large volume of high-quality oil (29° API). In addition, the associated challenges for project development are also noteworthy, considering the high gas/oil ratio (420 std m³/std m³) and CO₂ content in the associated gas (44%), water depth (2,100 meters) and distance from the coast (180 km).

Project development

The start of production (first oil) occurred in 2017, within the Extended Well Test ("EWT") campaign, using 2 wells (1 producer and 1 injector), and the chartered unit FPSO Pioneiro de Libra, which has the capacity of 50 mbbl/d of oil and four million m³/day of gas.

The Early Production System ("EPS") has already produced a cumulative production of almost 40 MMbbl of oil, with a peak of 44 mbbl/d from one single well. Moreover, associated gas production accounted for over 2.6 billion m³ of gas, of which 9.6% were consumed for FPSO power generation, and approximately 88.5% were reinjected in the reservoir along with almost 1.8 million tons of CO₂.

In 2021, four years after the EPS start-up, the production development initial phase was approved, and we reached the final investment decision, with an associated CAPEX of US\$18 billion. To date, around 33% of the sanctioned CAPEX were already invested.

The production arrangement for the Mero field anticipates the FPSO Mero 1, Mero 2, Mero 3 and Mero 4. Each FPSO will have the capacity to process up to 180 mbbl/d and 12 million m³ of gas per day. The Mero 1 production system is expected to start operating in 2022, Mero 2 in 2023, Mero 3 in 2024 and Mero 4 in 2025.

The Mero Project estimates a return over three billion bbl of oil recovery until 2048 with an annual production peak of 650 mbbl/d. Due to Production Sharing Agreement limitations, production anticipation is an important lever for project value, and for that reason the development of new technologies is a strong driver in the Mero field.

HISEP™

HISEP™ is a subsea separation technology that separates, at the seabed, gas with high CO₂ content under high pressure, followed by direct reinjection of this separated stream to the reservoir by the use of centrifugal pumps. HISEP™ debottlenecks the topsides gas processing plant and extends the oil production plateau by reducing the GOR of the oil that reaches the FPSO.

Hence HISEP™ has the potential to accelerate oil production, as well as increasing the recovery factor. It has been developed in a collaborative and integrated environment congregating major oil companies, including the engagement of reputed and experienced market suppliers to deploy the solution and generate huge value for the Mero field and for the oil and gas industry. The Mero field will be the first field to implement HISEP™ technology for qualification.

Production Individualization Agreement

On December 9, 2021, the ANP approved the Production Individualization Agreement ("AIP") of the Mero accumulation. The AIP occurs in situations where the reservoirs extend beyond the areas granted or contracted, as regulated by the ANP. The Agreement became effective on January 1, 2022.

Under the terms of the AIP, the Mero Joint Reservoir comprises two areas, namely (1) Mero Field area (as defined in the PSC LIBRA-P1), representing 96.50% and (2) Adjacent area (Federal Government, represented by PPSA), representing 3.50%.

The agreement establishes the stakes of each party and the rules of joint execution of the operations of development and production of oil and natural gas in the joint reservoir. The stakes of each party in the Mero Joint Reservoir were then updated as follows: Petrobras with a 38.60% stake, Shell Brasil with a 19.30% stake, TotalEnergies with a 19.30% stake, CNOOC with a 9.65% stake, CNOOC Limited with a 9.65% stake and Pré-sal Petróleo – PPSA, representing the Brazilian Government, with a 3.50% stake.

As a result of the process of individualizing the production of the accumulation, in December 2021, the above-mentioned parties to the Mero Joint Reservoir negotiated the equalization between the expenses incurred and the revenues obtained with the volumes produced up to the effective date of the AIP.

Production

In 2021, our total production of oil and gas, including NGL, was 2,774 mboed, of which 2,732 mboed were produced in Brazil and 42 mboed were produced abroad, a 2% decrease compared to 2020. This production decline was due to divestment, decommissioning and the natural decline of the production.

Our 2021 operating performance was partially leveraged by the ramp-up of new production systems in the Tupi, Berbigão and Sururu, Atapu and Sépia fields, offsetting the continuous negative effects derived during the Covid-19 pandemic.

Our production in the pre-salt layer reached 1,616 mbbl/d in 2021, representing an increase of 5% in relation to our production in 2020. In 2021, the oil production in the pre-salt layer represented 73% of all oil production in Brazil, compared to 68% in 2020.

OIL AND GAS PRODUCTION

	2021	2020	2019	2021 vs 2020
Crude oil and natural gas – Brazil (mboed)	2,732	2,788	2,688	-2%
Onshore (mbbl/d)	89	105	124	-15%
Shallow Water (mbbl/d)	9	32	66	-72%
Post-salt deep and ultra-deepwaters (mbbl/d)	496	582	704	-15%
Pre-salt (mbbl/d)	1,616	1,546	1,277	5%
Crude oil (mbbl/d)⁽¹⁾	2,211	2,266	2,172	-2%
Natural gas (mboed)	521	522	516	0%
Crude oil and natural gas – Abroad⁽²⁾ (mboed)	42	48	82	-13%
TOTAL	2,774	2,836	2,770	-2%

(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 5%, reflecting the high efficiency and the ramp-up of new units. 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 14.8%. This was due to divestment, decommissioning and the natural decline of the production.

Shallow waters oil production decreased by 71.9%, to nine mbbl/d, due to divestment, decommissioning and the natural decline of the production. Onshore oil production decreased by 15.2%, to 89 mbbl/d, due to divestment, decommissioning and the natural decline of the production.

We produced 87.8 million m³/d of gas in 2021. From that volume, we used 49.9 million m³/d in our production processes (reinjected, flared, consumed, liquefied) and destined 37.9 million m³/d for sale.

Achievement of 2021 Production Target

We achieved our production targets for 2021, established in the 2021-2025 Strategic Plan, as described below:

PRODUCTION TARGETS FOR 2021

Production	Performed	Goal
Oil and NGL (MMbpd)	2.22	2.21 ± 4%
Oil, NGL and commercial gas (MMboed)	2.46	2.43 ± 4%
Total production Oil and Gas (MMboed)	2.77	2.72 ± 4%

The achievement of this result demonstrates our commitment to meeting our goals, which have been reached by maintaining the focus of our activities on deep and ultradeepwater assets.

Revision of the 2022 production target

We have revised our oil and gas production target for 2022, previously included in our Strategic Plan, to reflect the effect of the result of the 2nd round of bids for the Transfer of Rights Surplus under the Production Sharing Regime.

With the effectiveness of the Production Sharing Regime in Atapu and Sepia, expected by early May 2022, our interests in the shared contracts, including the portions of the Production Sharing Agreement and the Concession Agreements, and excluding the portion of PPSA, will be respectively 65.69% for Atapu and 55.30% for Sepia.

The start of production sharing for FPSOs P-70 and Carioca, operating in the Atapu and Sépia fields, respectively, will impact our production target disclosed in the Strategic Plan. In the year 2022, we will have a reduction in the amount of 70 Mboed for the total production of oil and gas, and the change of the range from 2.7 MMboed to 2.6 MMboed with a variation of +/- 4%. Oil production and commercial production had an impact of about 60 Mboed, but remained with the same ranges, respectively, 2.1 MMbpd and 2.3 MMboed, with a variation of +/- 4%. For the period between 2023 and 2026, the average estimated impact for production is a reduction of 0.1 MMboed.

Our investments forecast for 2022, totaling US\$11 billion, remains unchanged. In 2022, the development plans for the production of the surplus volumes in the Atapu and Sépia fields will be discussed with our partners and PPSA, which should include the implementation of a new production system in each field. These adjustments will be reflected and disclosed in the 2023-2027 Strategic Plan.

Lifting Cost

In 2021, our lifting cost, without government participation or leases, was US\$5.0 per boe, which represents a 4% decrease from the 2020 cost of US\$5.2 per boe. Including leases, our lifting cost in 2021 was US\$6.6 per boe, which represents a 3% decrease from the 2020 cost of US\$6.8 per boe.



Shared deposits between different fields

The participation of consortium members in any fields mentioned refers exclusively to the participation of such members in the contract related to such field. On certain occasions, some of these fields are subject to Production Individualization Agreements ("AIPs"), resulting in shared deposits between different fields. Under AIPs, costs, investments and production volumes are shared between the parties thereto.

After ANP's approval, the AIPs are disclosed to the market and published on our Investor Relations website at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.

Below are the most relevant fields subject to AIPs to which we are party. This list is not exhaustive and other fields not mentioned below may also be subject to AIPs.

TUPI

The AIP of Tupi's joint reservoir, located in the Santos Basin, was approved by ANP in March 2019.

The joint reservoir comprises Tupi's reservoir and is shared between:

- BM-S-11 consortium contract (Tupi Field), operated by us (65%), in partnership with Shell (25%) and Galp (10%);
- Tupi South Block of the Transfer of Rights (Sul de Tupi field) operated by us with a 100% interest; and
- Non-Contracted Area, which belongs to the Federal Government, represented by Pre-Sal Petróleo – PPSA.

Tupi's AIP does not cover the so-called Iracema reservoir, which remains with the same interests of the BM-S-11 consortium.

The interest of each party in Tupi's joint reservoir are as follows:

Partner	Share (%)
Petrobras (operator)	67.22
Shell	23.02
Galp	9.21
PPSA	0.55

MERO

The AIP of the Mero accumulation, located in the Santos Basin, was approved by ANP in December 2021.

The Mero joint reservoir comprises:

- Production Sharing Contract LIBRA: operated by us (40%) in partnership with Shell (20%), TotalEnergies (20%), CNPC (10%), CNOOC (10%) and PPSA; and
- Non-Contracted Area, which belongs to the Federal Government, represented by Pre-Sal Petróleo – PPSA.

The stakes of each party in the Mero joint reservoir are as follows:

Partner	Share (%)
Petrobras	38.60
Shell	19.30
TotalEnergies	19.30
CNODC	9.65
CNOOC	9.65
Pré-sal Petróleo - PPSA	3.50

ATAPU

The AIP of Atapu accumulations, located in the Santos Basin, was approved by ANP in September 2019

The Atapu Joint Reservoir comprises:

- BM-S-11A (Oeste de Atapu Field), operated by us (42.5%), in partnership with Shell (25%), TotalEnergies (22.5%) and Galp (10%);
- Entorno de Iara Block of the Transfer of Rights Agreement (Atapu field), operated by us, and where we hold a 100% stake; and
- Non-Contracted Area belongs to the Federal Union, represented by PPSA.

The interest of each party in Atapu joint reservoir are as follows:

Partner	Share (%)
Petrobras (operator)	89.26
Shell	4.26
TotalEnergies	3.83
Galp	1.70
PPSA	0.95

The Production Sharing Contract in Atapu is expected to become effective in early May 2022, with 39.5% of Transfer of Rights Agreement and 60.5% of the Surplus Volumes of Transfer of Rights.

As of May 2022, the interest of each party in the Atapu joint reservoir will be:

Partner	Share (%)
Petrobras (operator)	65.69
Shell	16.66
TotalEnergies	15.00
Galp	1.70
PPSA	0.95

SÉPIA

The AIP of Sépia accumulations, located in the Santos Basin, was approved by ANP in September 2019.

The Sépia Joint Reservoir comprises:

- BM-S-24 (Sépia Leste Field), operated by us (80%), in partnership with Galp (20%); and
- Nordeste de Tupi Block of the Transfer of Rights Agreement (Sépia field), operated by us (where we hold a 100% stake).

The interest of each party in Sépia joint reservoir are as follows:

Partner	Share (%)
Petrobras (operator)	97.59
Galp	2.41

The Production Sharing Regime in Sépia is expected to become effective in early May 2022, with 31.3% of Transfer of Rights Agreement and 68.7% of the Surplus Volumes of Transfer of Rights.

As of May 2022 the interest of each party in the Sépia joint reservoir will be:

Partner	Share (%)
Petrobras (operator)	55.30
TotalEnergies	16.91
Petronas	12.69
QP Brasil	12.69
Galp	2.41

BÚZIOS AND TAMBUATÁ

The ANP approved the AIP of Búzios in October 2019.

In November 2019, we in partnership with CNODC and CNOOC obtained the rights to explore the Surplus Volumes of Búzios field.

The Production Sharing Regime in Búzios became effective in September 2021. The sharedholdings in the shared reservoir are:

Partner	Share (%)
Petrobras	92.66
CNODC	3.67
CNOOC	3.67

The interest of each party in the Búzios joint reservoir are:

- 99.36% - Búzios field;
- 0.64% - Tambuatá field operated by us with a 100% interest.

TARTARUGA VERDE

In the area of the Tartaruga Verde Field, Concession Contract BM-C-36, there are two producing reservoirs: Tartaruga Verde Reservoir, which is totally contained within the ring fence limits, and the Shared Tartaruga Mestiça Reservoir, which goes beyond the ring fence limits area in the pre-salt polygon. This area was fully acquired by us in 2018, through the block of Sudoeste of Tartaruga Verde.

The AIP of the Tartaruga Mestiça Shared Reservoir was signed in October 2014 between us and PPSA, and has been in force since March 2018.

In December 2018, the Production Sharing Contract (CPP de Tartaruga Verde _P5) was signed for the block of Sudoeste de Tartaruga Verde. This contract was signed between PPSA and us.

In December 2018, we declared the commerciality of the portion of the Tartaruga Mestiça Shared Reservoir that extends to the block of Sudoeste of Tartaruga Verde under the name of Field of Tartaruga Verde Sudoeste. The commerciality of this field was confirmed by the ANP in January 2019. The portion of the Tartaruga Mestiça Shared Reservoir present in the CPP of Sudoeste de Tartaruga Verde became known as Campo de Tartaruga Verde Sudoeste.

In January 2021, the ANP approved Amendment 2 to the AIP, whereupon the following percentages for the division of the deposit (Tract Participation) became effective:

- Area under the Concession Agreement (BM-C-36) – 82.19%
- Area under the Sharing Agreement (Block of Sudoeste de Tartaruga Verde) – 17.81%

In December 2019, we assigned to Petronas 50% of our concessions rights of the Tartaruga Verde Fields (BM-C-36) and Espadarte Module III. We also established a consortium with Petronas,

pursuant to which we carry out operator activities in aforementioned operations. The Tartaruga Verde Sudoeste Field, under the Production Sharing Agreement, remained entirely with us.

Shared Assets are used to produce the Tartaruga Mestiça and Tartaruga Verde deposits, which include the FPSO Cidade de Campos dos Goytacazes.

SAPINHOÁ

In September 2000, we, YPF Brasil Ltda (YPF) and BG E&P Brasil LTDA (BG) entered into an agreement to create the BM-S-9 consortium. YPF and BG were later acquired by Shell and Repsol, respectively.

In September 2011, the consortium informed ANP that Sapinhoá field could extend to a non-contracted area.

The ANP approved the AIP of Sapinhoá Field shared deposit, located in the Santos Basin, in January 2016

In October 2017, the same consortium acquired the rights to produce in the extended area Entorno de Sapinhoá.

In March 2018, the ANP approved an amendment of the AIP, including the Entorno de Sapinhoá area with the following participations:

Partner	Share (%)
Petrobras	45.00
Shell	30.00
Repsol Sinopec	25.00

MAIN PRODUCTION FIELDS

Basin	Field	Main source	Production units						API gravity	Sulphur content (% wt)	2021 oil production (mbbl/d)
			Owned	Capacity (mbbl/d)	Leased	Capacity (mbbl/d)	Consortium				
Santos	Tupi	Pre-salt	3	3 units with 150	6	1 unit with 100 1 unit with 120 4 units with 150	Petrobras (65%), Shell (25%), Petrogal (10%)	29.5 – 30.9	0.33 – 0.40	620	
Santos	Búzios	Pre-salt	4	4 units with 150	—	—	Petrobras (100%)(1)	28.5 – 28.8	0.32 – 0.33	513	
Santos	Sapinhoá	Pre-salt	—	—	2	2 units with 150	Petrobras (45%), Shell (30%), Repsol Sinopec (25%)	29.8	0.4	93	
Campos	Jubarte	Pre-salt	2	2 units with 180	2	1 unit with 100 1 unit with 110	Petrobras (100%)	17.1 – 30.2	0.29 – 0.56	186	
Campos	Roncador	Post-salt	4	3 units with 180 1 unit with 190	—	—	Petrobras (75%), Equinor (25%)	17.7 – 28	0.54 – 0.73	112	

Santos	Atapu	Pre-salt	1	1 unit with 150	—	—	Petrobras (90.1%)	27.7	0.4	15
							Petrogal (1.7%)			
							Shell (4.3%)			
							TotalEnergies (3.9%)			
Campos	Marlim Sul	Post-salt	3	1 unit with 140 1 unit with 180 1 unit with 200	—	—	Petrobras (100%)	17.6 – 24.6	0.59 – 0.73	110
Campos	Tartaruga Verde	Post-salt	—	—	1	1 unit with 150	Petrobras (50%)	27.5	0.76	45
							Petronas (50%) ¹			
Campos	Marlim	Post-salt	7	1 unit with 50 1 unit with 75 4 units with 100 1 unit with 180	—	—	Petrobras (100%)	19.4	0.77	61
Campos	Marlim Leste	Post-salt	1	1 unit with 180	1	1 unit with 100	Petrobras (100%)	23.4 – 28.5	0.50 – 0.52	41
<hr/>										<hr/>
Other pre and post-salt fields										317
Onshore										89
Shallow waters										9
TOTAL										2,211

(1) Including operations in 2021. Since September 2021, those Participations were changed to: Petrobras (91.8%), CNOOC (3.67%), CNOOC (3.67%) and PPSA (0.87%).

PRODUCTION 2021





Búzios field

The Búzios field started production in April 2018 under the Transfer of Right Contract (ToR) and, in December 31, 2021, reached a total accumulated production of 590.9 MMboe (or 584.2 mmboe considering our share) under the co-participation agreement.

The Búzios field is an asset with significant reserves, high productivity wells, light oil, low lifting costs and low emissions. 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 ToR of the Búzios field, in a partnership with CNOOC Brasil Petróleo e Gás Ltda. ("CNOOC") (5%) and CNOOC Petroleum Brasil Ltda. ("CNOOC") (5%). This acquisition is consistent with our strategy of focusing our investments in world-class assets.

In March 2020, we entered into the Production Sharing Contract for the Suplus of the ToR of the Búzios Area, with CNOOC and CNOOC as private partners and Pré-Sal Petróleo S.A (PPSA) as its manager.

The co-participation agreement, which regulates the coexistence of the Transfer of Rights Contract and Production Sharing Contract for the surplus of the ToR, was approved by ANP on August 12, 2021. As a consequence, we received a compensation of US\$2.9 billion from CNOOC and CNOOC. Since September 1, 2021, we have a 92.6594% participation interest in the Búzios/Tambuatá shared reservoir and CNOOC and CNOOC each have a 3.6703% interest.

In September 2021, CNOOC expressed its interest in exercising the option to purchase an additional share of 5% in the Production Sharing Contract of the ToR Surplus. This purchase option was already provided for in the contract signed with the partners in the bidding of the surplus volume to the Transfer of Rights Agreement of the Búzios field, held on November 6, 2019. The effectiveness of this transaction will change participations interest in the Búzios/Tambuatá shared reservoir as follows: Petrobras: 88.9891%, CNOOC: 7.3406% and CNOOC: 3.6703%. The transaction remains subject to the approvals by the CADE, ANP and the Ministry of Mines and Energy ("MME").

The estimated amount that we will receive in cash at the closing of the transaction for CNOOC's portion, subject to adjustments pursuant to the relevant agreements, is US\$ 2.1 billion.

There are currently four units in operation in Búzios. A fifth platform, the FPSO Almirante Barroso, is under construction, with 90% physical project progress and expected to start production in the first quarter of 2023. FPSO Almirante Barroso will be the first chartered unit in the Búzios Field, capable of processing 150,000 barrels of crude oil per day.

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, P-79, P-80, P-82 and P-83, five platforms that will be owned by us, are expected to start production in 2025, 2026 and 2027.

In October 2021, with less than three years of operation, the Búzios field surpassed the 655.9 kbpd production mark due to good operating results and a technical study that allowed its units to operate above the nominal capacity.

In 2021, investments in the Búzios field totaled US\$2 billion. According to the Strategic Plan, US\$23 billion will be invested by us over the next five years. The average daily production from 2022 to 2026 is expected to be 651.47 mbbl (our share), with Operational Expenditures around US\$6.2 billion in the period (our share), including leasing of vessels.

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.

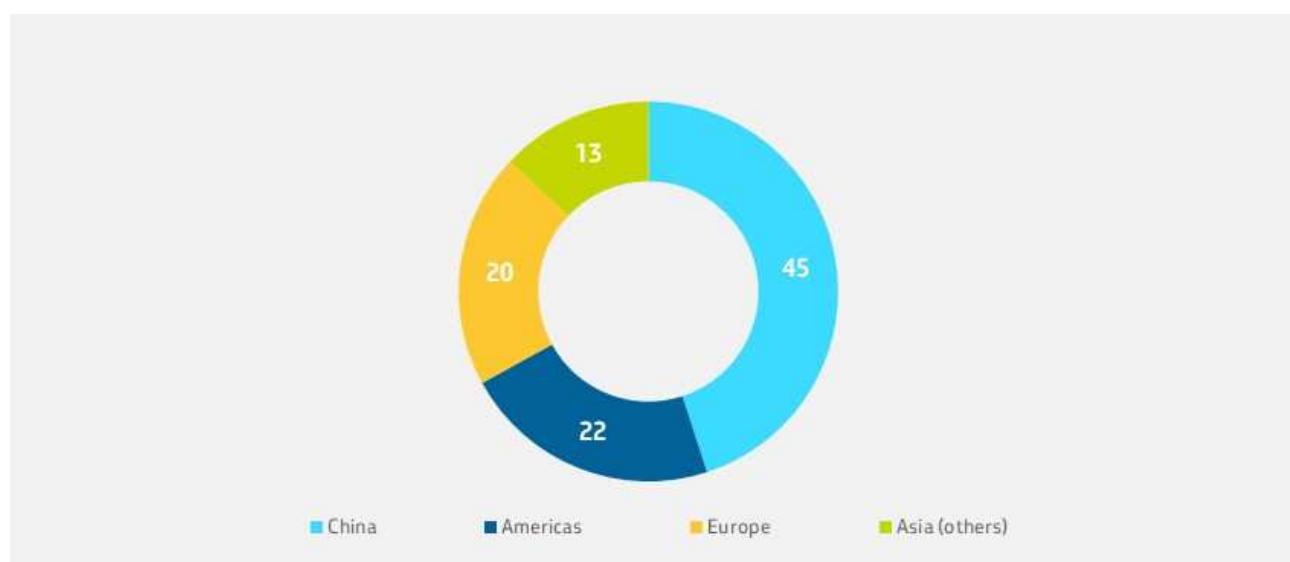
For more information on our production of crude oil, natural gas, synthetic oil and synthetic gas by geographic area in 2021, 2020 and 2019, see Exhibit 15.3 to this annual report.

Customers and Competitors

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, and in 2021 the crude oil volume committed through long-term contracts with fixed quantity subject to final agreement on commercial terms was approximately 130,000 bbl/d.

Our overseas portfolio includes approximately 30 clients, such as refiners that process or have processed Brazilian oils regularly, distributed throughout China, the 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 2021, we have primarily exported low sulfur fuel oil as well as high sulfur fuel oil to several destinations. Our fuel oil is available in the major hubs in the market such as Singapore, Arab Gulf (AG), the Mediterranean and Northwest Europe, 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 and Subpart 229.1200 of Regulation S-K) 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. Reserve volumes of non-traditional reserves such as synthetic oil and gas are also included in this annual report in accordance with the SEC regulation.

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 19 years of experience in the oil and gas industry.

DeGolyer and MacNaughton ("D&M") conducted a reserves evaluation of 97.5% of our net proved crude oil, condensate and natural gas reserves as of December 31, 2021 in Brazil. The amount of reserves reviewed by D&M corresponds to 97.0% 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.

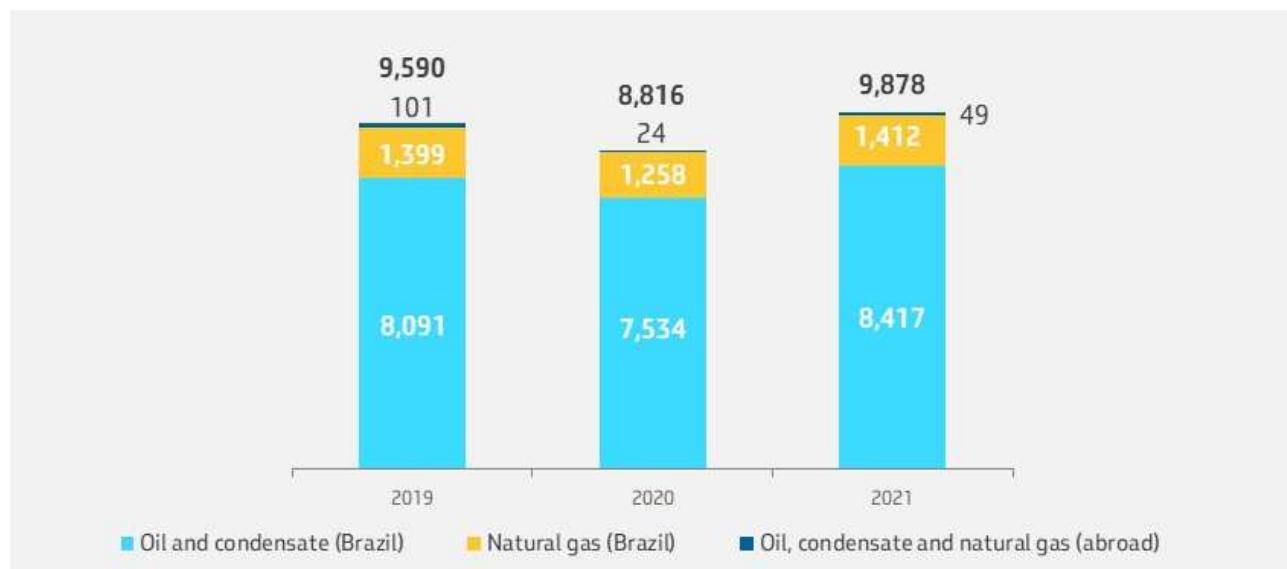
For a description of the risks relating to our reserves and our reserve estimates, see "Risks" in this annual report.

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, 2021 were estimated at 9,878 million boe. This estimate includes our interest in our equity method investees, which represents 0.2% of our net reserves.

PROVED RESERVES⁽¹⁾ (million boe)



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

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⁽¹⁾ (million boe)



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

(2) The 896 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 2021, we incorporated 1,969 million boe of proved reserves, including:

- addition of 1,376 million boe due to new projects, mainly in the Búzios field and in other fields in the Santos and Campos Basins. The new projects in the Búzios field were made possible due to the acquisition of the Transfer of Rights Surplus and the approval of the Búzios Coparticipation Agreement;
- addition of 429 million boe related to economic revisions, mainly due to the increase in oil prices; and
- addition of 164 million boe arising from technical revisions, mainly due to good performance and increased production experience in reservoirs in the pre-salt layer of the Santos Basin.

The additions in our proved reserves were partially offset by the reduction of 11 million boe due to sales of proved reserves.

RESERVES INDEXES 2021



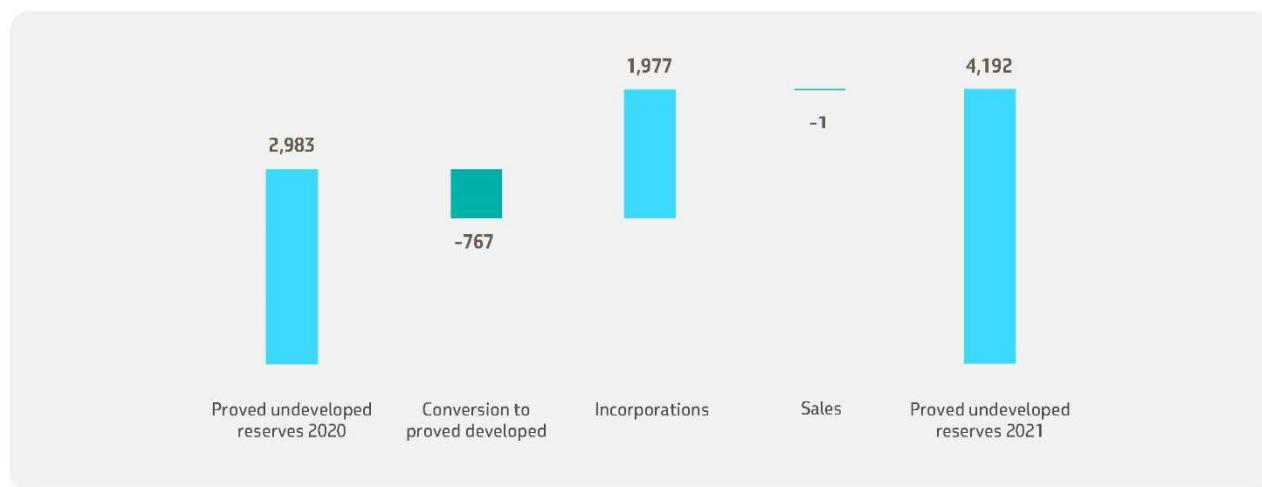
Proved Undeveloped Reserves

As of December 31, 2021, our proved undeveloped reserves were estimated at 4,192 million boe, a net increase of 41% when compared to 2020 year-end.

In 2021, we incorporated 1,977 million boe of proved undeveloped reserves, including:

- addition of 1,374 million boe due to new projects, mainly in the Búzios field and in other fields in the Santos and Campos Basins. The new projects in the Búzios field were made possible due to the acquisition of the Transfer of Rights Surplus and the approval of the Búzios Coparticipation Agreement;
- addition of 312 million boe arising from technical revisions, mainly due to good performance and increased production experience in reservoirs in the pre-salt layer of the Santos Basin; and
- addition of 291 million boe related to economic revisions, mainly due to the increase in oil prices.

The additions in our proved undeveloped reserves were partially offset by the conversion of 767 million boe of proved undeveloped reserves to proved developed reserves, mainly as a result of FPSO Carioca platform start-up in the Santos Basin and offshore drilling and tieback operations, and by the reduction of 1 million boe due to sales of proved undeveloped reserves.

CHANGES IN PROVED UNDEVELOPED RESERVES⁽¹⁾ (million boe)

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

As of December 31, 2021, 33% (1,395 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 2021, we invested a total of US\$6.1 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, 2021. 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, 2021								
	Oil		Natural Gas		Synthetic Oil		Synthetic gas		
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	
Consolidated subsidiaries									
Brazil	4,518	4,488	218	211	0	0	0	0	0
South America (outside of Brazil)	54	22.8	202	97.7	0	0	0	0	0
Total consolidated	4,572	4,510.8	420	308.7	0	0	0	0	0
Equity method investees									
South America (outside of Brazil)	0	0	0	0	0	0	0	0	0
North America	43	3.29	7	0.84	0	0	0	0	0
Total equity method investees	43	3.29	7	0.84	0	0	0	0	0
TOTAL GROSS AND NET PRODUCTIVE WELLS	4,615	4,514.09	427	309.54	0	0	0	0	0

GROSS AND NET DEVELOPED AND UNDEVELOPED ACREAGE (in acres)

	As of December 31, 2021			
	Developed acreage		Undeveloped acreage	
	Gross	Net	Gross	Net
Consolidated				
Brazil	4,232,089.9	3,769,751.4	884,053.1	732,672.7
South America (outside of Brazil)	2,304.0	774.1	2,310.0	776.2
Total consolidated	4,234,393.9	3,770,525.5	886,363.1	733,448.9
Equity method investees				
North America	22,897.0	1,985.2	147,157.1	10,969.3
Total equity method investees	22,897.0	1,985.2	147,157.1	10,969.3
TOTAL GROSS AND NET ACREAGE	4,257,290.9	3,772,510.7	1,033,520.2	744,418.2

For "net" figures, we used our working interest held on December 31, 2021. 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

	2021	2020	2019⁽¹⁾
Net productive exploratory wells drilled			
Consolidated subsidiaries			
Brazil	3.4	4.6	5.5
South America (outside of Brazil)	0.32	0	1.0
Total consolidated subsidiaries	3.72	4.6	6.5
Equity method investees			
North America ⁽²⁾	—	—	—
Africa	—	—	—
Total productive exploratory wells drilled	3.72	4.6	6.5
Net dry exploratory wells drilled			
Consolidated subsidiaries			
Brazil	0.4	1.5	1.0
South America (outside of Brazil)	—	—	—
Total consolidated subsidiaries	0.4	1.5	1.0
Equity method investees			
North America ⁽²⁾	—	—	—
Africa	—	—	—
Total dry exploratory wells drilled	0.4	1.5	1.0
Total number of net exploratory wells drilled	4.12	6.1	7.5
Net productive development wells drilled			
Consolidated subsidiaries			
Brazil	26.23	79.0	102.0
South America (outside of Brazil)	4.7	0.336	—
Total consolidated subsidiaries	30.9	79.3	102.0
Equity method investees			
North America ⁽²⁾	0.2042	0.306	0.14
Africa	0	0	0.6
Total productive development wells drilled	31.1	79.64	102.7
Net dry development wells drilled			
Consolidated subsidiaries			
Brazil	—	—	—

	2021	2020	2019 ⁽¹⁾
South America (outside of Brazil)	—	—	—
Total consolidated subsidiaries	—	—	—
Equity method investees	—	—	—
North America ⁽²⁾	—	—	—
Africa	—	—	—
Total dry development wells drilled	—	—	—
TOTAL NUMBER OF NET DEVELOPMENT WELLS DRILLED	31.1	79.64	102.7

(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, 2021.

The following table summarizes the number of wells in the process of being drilled as of December 31, 2021.

NUMBER OF WELLS BEING DRILLED AS OF DECEMBER 31, 2021

	Gross	Net
Consolidated Subsidiaries		
Brazil	7.0	4.0
International		
South America (outside of Brazil)	0	0
North America	0	0
TOTAL WELLS DRILLING	7.0	4.0

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\$)

2021	South America		Total
	Brazil	South America (outside of Brazil)	
Average sales prices			
Oil and NGL, per barrel	67.48	34.43	67.45
Natural gas, per thousand cubic feet ⁽¹⁾	7.61	3.21	7.43
Synthetic oil, per barrel	57.46	-	57.46

Synthetic gas, per thousand cubic feet	5.20	-	5.20
Average production costs, per barrel – total	3.66	5.05	3.68

2020

Average sales prices			
Oil and NGL, per barrel	39.96	36.89	39.95
Natural gas, per thousand cubic feet ⁽¹⁾	5.63	3.65	5.47
Synthetic oil, per barrel	33.2	—	33.2
Synthetic gas, per thousand cubic feet	2.52	—	2.52
Average production costs, per barrel – total	4.11	4.35	4.11

2019

Average sales prices			
Oil and NGL, per barrel	61.25	36.89	61.25
Natural gas, per thousand cubic feet ⁽¹⁾	7.72	3.65	7.55
Synthetic oil, per barrel	50.55	—	50.55
Synthetic gas, per thousand cubic feet	3.53	—	3.53
Average production costs, per barrel – total	7.05	4.69	7.02

(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.

For more information about our capitalized exploration costs, see Note 26 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 2021, we produced 1.852 million bbl/d of oil products, from the processing of Brazilian oil (91.5% of feedstock) and imported oil (8.5% 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 12 refineries in Brazil, with a total net crude distillation capacity of 1,897 mbbl/d. This represents 86% of all refining capacity in Brazil according to the 2021 statistical yearbook published by the ANP. Until November 2021 we also owned and operated RLAM refinery with a capacity of 279 mbbl/d. The sale of the RLAM refinery was completed on November 30, 2021. 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 40 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 13 third-party terminals.



Start Operation

Crude Distillation Capacity

API Gravity

1) Operated by Transpetro, a 100% Petrobras subsidiary.

2) Signing of REMAN in August 2021 and SIX in November 2021.

3) 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 oil 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 considered the divestment of approximately 50% of our refining capacity as of the date of the agreement, which at such time comprised 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.

In August 2021, we signed an agreement with Ream Participações S.A. to sell REMAN and its associated logistics assets. The transaction is subject to the satisfaction of conditions precedent, such as approval by the CADE. Until the conditions precedent are met and the transaction is closed, we will maintain the regular operations of the refinery and all associated assets.

In November 2021 we completed the sale of RLAM refinery.

In November 2021 we signed an agreement with Forbes & Manhattan Resources Inc. ("F&M Resources"), for the sale of the shares of the company that will own the Shale Industrialization Unit ("SIX"), located in São Mateus do Sul/PR.

In January 2022, we approved the sale of our stake in the Potiguar Cluster, which includes, among its assets, the AIG (Former RPCC). Until the conditions precedent are met and the transaction is closed, we will continue to operate the assets.

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

 Main Assets

	2021	2020	2019
Transport and storage			
Pipelines (km)	7,719	7,719	7,719
Own	6,812	7,499	7,499
Third parties ⁽¹⁾	907	220	220
Vessel fleet (owned and chartered)	123	131	128
Own	26	30	45
Chartered	97	101	83
Terminals	59	61	63
Own	40	44	44
Third parties ⁽²⁾	19	17	19
Refining			
Refineries	12	13	13
Brazil ⁽³⁾	12	13	13
Abroad	-	-	-
Nominal installed capacity (mbbl/d)	1,897	2,176	2,176
Brazil	1,897	2,176	2,176
Abroad	-	-	-

(1) Third party pipelines that have existing Transpetro transport contracts.

(2) Third party terminals that have existing contracts for the use of the storage service, including six terminals operated by Transpetro.

(3) Signing of REMAN in August 2021.



RefTOP - World Class Refining program

In May 2021, we launched the RefTOP - World Class Refining program with the objective of being among the best oil refining companies in the world in terms of reliability, productivity, operational performance and energy efficiency. RefTOP consists of a set of initiatives that seek to implement improvements to increase the efficiency and operational performance of the refineries that are not in the divestment portfolio - RPBC, REDUC, RECAP, REPLAN, and REVAP - and to position us more competitively in the opening of the oil refining market in the country. We evaluated world benchmarks of the main refining indicators to define the program's objectives.

RefTOP provides for initiatives to increase the refineries' energy performance, making better use of inputs such as natural gas, electricity, and steam in their own operations.

The program will promote the intensive use of digital technologies, automation and robotization in our refineries. One of the examples of digital technologies that are already being adopted by us and that will be expanded with RefTOP are the Digital Twins - digital representations of the operational facilities - for real-time monitoring, failure reduction, and easier decision-making. Another important driver of the program is the increase in the production of high value-added oil products, such as diesel and propylene - raw material for the petrochemical industry for the production of packaging and automotive parts, for example. We will leverage the processing of pre-salt oils, which have low sulfur content, bringing competitive advantages and opportunities to increase our refining margin, favoring the production of S-10 diesel and bunker.

The investments in RefTOP through 2025 are approximately US\$300 million and are included in the US\$7.1 billion of investments contemplated for Refining, Gas & Power in the Strategic Plan.

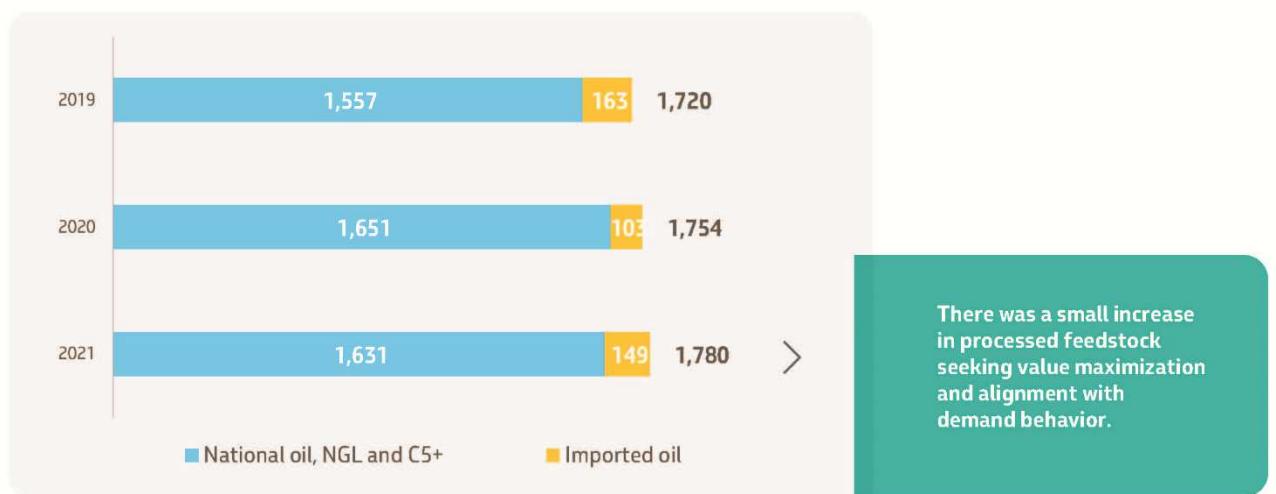
Refining

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

In 2021, we processed 1,780 mbbl/d of oil in our 12 refineries and RLAM (until its sale in November 2021). The following graphs show the processed feedstock and the performance of our refineries.

In 2021, our refineries broke an internal production record of S-10 Diesel low-sulfur diesel, producing 21.2 million m³ of the product, a 10% higher volume than in 2020, when production reached 19.2 million m³.

PROCESSED FEEDSTOCK (mbbl/d)



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 2021, there was an increase in the production of oil products and the utilization factor of the refining system compared to 2020. Despite the concentration of maintenance stoppages in 2021 and the divestment of RLAM in November 2021, production increased as market recovered, after the low demand in 2020 due to the Covid-19 pandemic.

Diesel production increased in 2021, due to economic growth, mainly in the industrial sector, and reduction of third-party imports.

Gasoline production increased in 2021 as a result of the increase in the market due to the gain in share of gasoline over hydrated ethanol in flex-fuel vehicles, the reduction of third-party imports and the low demand in 2020 due to the Covid-19 pandemic.

In 2021, there was an increase in jet kerosene production following the recovery of the domestic market, after the impact of the Covid-19 pandemic on commercial jet fuel demand in 2020.

Naphtha production decreased in 2021, following the drop in sales in the domestic market, due to the new contracts in force with Braskem since December 23, 2020.

LPG production decreased in 2021 due to lower sales resulting from higher bottle prices and lower residential LPG consumption, which had increased in 2020 as a result of the Covid-19 pandemic.

Over the past 11 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.

One such investment is the implementation of a new diesel hydrotreatment unit at the Paulinia Refinery ("REPLAN"), currently in a bidding process.

With this project, REPLAN will be able to produce 100% ultra-low sulfur diesel (ULSD or S-10) and increase the production of jet fuel, aiming to meet the specification and quantities demanded by the future market, in an economical way, with operational safety and lower impacts to the environment.

The new diesel hydrotreatment unit will have a production capacity of 63 Mbpd of S-10 and is scheduled to start operation in 2025, in line with the Strategic Plan.

The following table sets out the performance of our refineries.

PERFORMANCE OF REFINERIES

	Crude distillation capacity (mbbl/d)	Nelson Complexity Index	Average throughput ⁽¹⁾ (mbbl/d)			Operational availability (%)			Total Utilization rate ⁽⁴⁾ (%)		
Refinery	2021	2021	2021	2020	2019	2021	2020	2019	2021	2020	2019
LUBNOR	8	3.5	8	8	7	97.8	97.3	95.3	94.5	103.4	86.9
RECAP	57	6.8	54	39	50	96.4	96.8	96.2	95.5	68.5	87.8
REDUC	239	15	186	178	190	96.4	96.8	96.9	79.0	76.2	80.4
REFAP	201	6	145	129	138	95.8	97.6	93.7	75.5	67.3	71.4
REGAP	157	7.9	134	123	134	96.5	97.4	96.3	87.4	79.3	88.2
REMAN	46	1.8	30	27	32	98.0	97.9	97.9	66.2	59.3	69.1
REPAR	208	7.8	181	179	168	97.7	97.8	94.2	87.8	86.4	81.2
REPLAN	434	6.9	355	306	326	96.8	96.8	96.2	82.5	71.1	76.1
REVAP	252	8.6	227	216	185	96.8	97.1	94.5	92.1	87.0	74.3
RLAM	279	7.7	179 ⁽²⁾	239	206	95.1	94.1	92.9	72.1	88.8	80.8
RPBC	170	10.2	149	143	133	95.3	96.2	95.3	88.2	84.5	78.5
AIG (Former RPCC)	38	1	29	29	32	—	—	—	—	—	—
RNEST	88	10.7	63	93	74	92.2	96.8	97.8	78.9	115.3	94.5
Average crude oil throughput	—	—	1,740	1,709	1,675	—	—	—	—	—	—
Average NGL throughput	—	—	40	45	45	—	—	—	—	—	—
Average throughput	—	—	1,780	1,754	1,720	—	—	—	—	—	—
Crude Distillation capacity	1,897 ⁽³⁾	—	—	—	—	—	—	—	—	—	—

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

(2) Average until November 2021.

(3) As of December 31, 2021 (does not consider RLAM).

(4) Total utilization rate considers the entire load in the distillation units, consisting of oil, C5 + and reprocessing (of oil and other products).

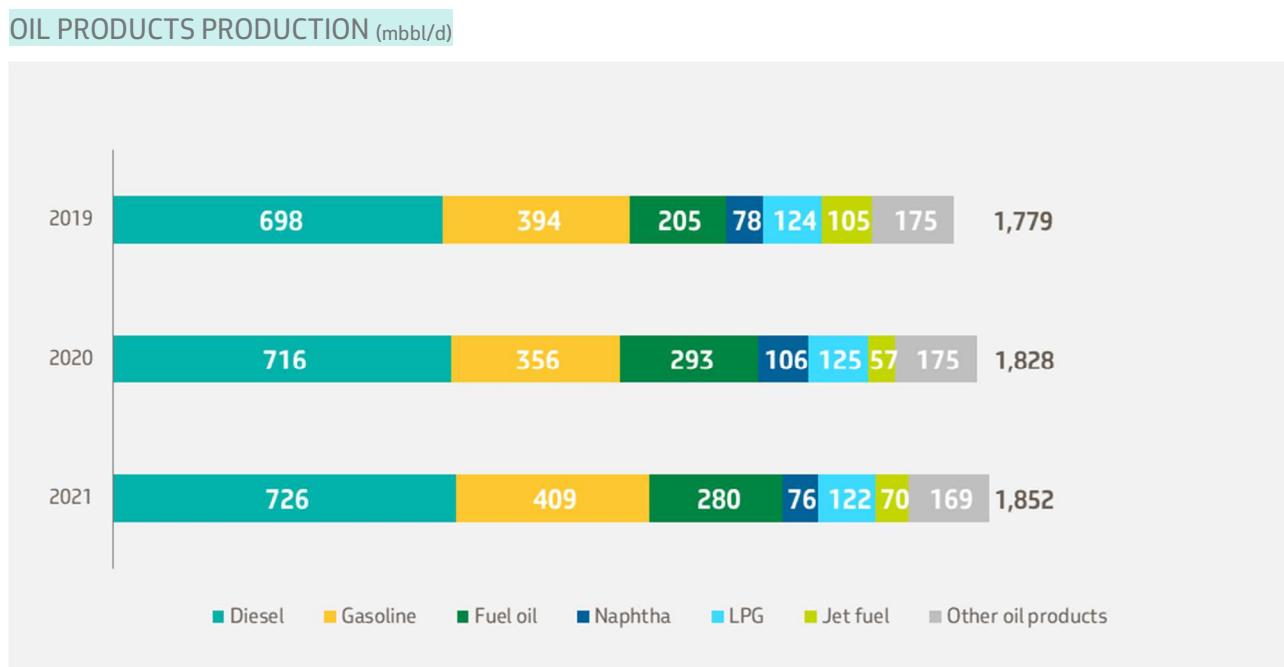
MAIN PRODUCTS, MARKETS AND STORAGE CAPACITY OF OUR REFINERIES⁽¹⁾

Refinery	Main products	Main markets in Brazil	Storage capacity (mbbl)	
			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
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
AIG (Former 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	— ⁽²⁾	0.7

(1) RLAM was divested on November 30, 2021.

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

With respect to oil products, we produced 1,852 mbbl/d of oil products in 2021, as shown in the following graphic:



Ongoing undertakings

Located in southeastern Brazil (Itaboraí, in the state of Rio de Janeiro), the GASLUB Cluster is comprised of the GASLUB Itaboraí 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. In 2021, several systems, mainly in utilities, have been authorized to work and tested for operation. The unit start up is scheduled for 4Q2022 (first processing train). Studies concerning new project alternatives for the GASLUB Cluster are still in progress, which include integration with the refinery operating in REDUC for the production of basic lubricants G-II and high-quality fuels and the construction of a Natural Gas Thermoelectric Power Plant.

With respect to the expansion of production capacity of ultra-low sulfur diesel (ULSD or S-10), in addition to the new hydrotreatment unit at the REPLAN, with an additional production capacity of 63 Mbpd of ULSD, we also have an ongoing investment at the REDUC. This investment is focused on modifications to an existing diesel hydrotreating unit (U-2700) in order to improve the S-10 production in 28,000 Mbpd, meeting market specifications and environmental requirements. This project is currently in its execution phase, expected to start in 2023. A very similar investment is planned for the REVAP, with modifications on an existing diesel hydrotreating unit (U-272D) in order to improve the S-10 production in 41,000 Mbpd. This project is currently developing basic engineering and is expected to start in 2025.

Our Strategic Plan has included additional investments in RNEST, aiming to add overall value to the facility. See "Strategic Plan" in this annual report.



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 low sulfur fuel oil (“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 LSFO, we have set new monthly 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.

In 2021, we have once again exported a large quantity of fuel oil (approximately eight million tons), with the LSFO cargos being commercialized at positive crackspreads. The Far East was, once again, the main destination of Brazilian exports of fuel oil.

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 derivates, ethanol, gas and biofuels for the supply of Brazilian machinery, thermoelectric and refineries, including import and export activities.

The terminals and pipelines operation are 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 46 terminals, 25 of which are marine and 21 onshore. The terminals have a total nominal storage capacity of 10.73 million m³. In 2021, Transpetro handled 600.8 million m³ of oil and oil products, totaling 8,707 operations with tankers and oil barges.

VOLUME MOVED AT TERMINALS AND PIPELINES (million m³)



Fuel theft in onshore pipelines

Aiming to strengthen our commitment to life, the environment and operational safety, in 2021 we strengthened our relationship with the Public Prosecutor's Office and public security authorities. Upon our admission to the ICL (*Instituto Combustível Legal*) and with the active participation of Transpetro, we started to address the issue of fuel theft in pipelines, also known as illegal taps. With these actions and the constant investments in detection systems and monitoring of pipelines, combined with the permanent efforts of several departments of Transpetro, we managed to reduce the number of illegal taps by more than 49% compared to 2020 and a significant reduction in the volume of stolen product. Increased promptness in locating illegal taps minimizes the risks to the population, contributes to the environmental preservation, to the integrity of the pipelines, as well as to avoid interruption of pipeline operations, reducing financial losses and impacts on our image.

In 2021, we recorded a loss of 1,800 m³ of oil and oil products, a 64% decrease compared to the volume lost in 2020, when we recorded a loss of 4,973 m³. The number of occurrences of theft of oil and derivatives reached 102, a decrease of more than 49% compared to the previous year when 201 occurrences were recorded. Out of the total number of cases, 81% occurred in the state of São Paulo, 10% in the state of Rio de Janeiro, 5% in the state of Minas Gerais and the remainder in other states. These three states accounted for 96% of the occurrences in 2021.

In 2021, we continued with the implementation of the Petrobras Integrated Pipeline Protection Program (*Pró-Dutos*), launched in 2019 and which we conducted in partnership with Transpetro. The program aims to expand and integrate all actions planned to mitigate the risks caused by theft of oil and oil products in pipelines. We also followed the Emergency Action Plan where we managed to achieve 93% of the planned actions. The programs are multidisciplinary and focus on several areas: intelligence, legislation, social responsibility, communication, technology and contingency.

We also launched a new advertising campaign to raise public awareness of fuel theft risks, more focused in sensitive areas and, to encourage the public to report suspicious activities through our communication channel. We continued to evaluate our crisis procedures and responses to emergencies resulting from fuel theft from pipelines through a tabletop simulated emergency exercise to test our business operational capabilities.

TERMINALS

Location	Terminal	Type	Nominal capacity (m³)
Alagoas	Maceió	Marine	58,266
	Manaus (REMAN)	Marine	—
Amazonas	Coari	Marine	86,147
Ceará	Mucuripe	Marine	—
	Barra do Riacho	Marine	107,834
Espírito Santo	Norte Capixaba	Marine	85,205
	Vitória	Marine	10,710
Distrito Federal	Brasília	Onshore	72,326
Goiás	Senador Canedo	Onshore	127,778
Maranhão	São Luís	Marine	78,897
Minas Gerais	Uberaba	Onshore	54,812
	Uberlândia	Onshore	45,876
Pará	Belém	Marine	48,187
Pernambuco	Suape	Marine	108,560
Paraná	Paranaguá	Marine	204,567
	Ilha d' Água	Marine	179,173
	Angra dos Reis	Marine	1,011,487
Rio de Janeiro	Campos Elíseos	Onshore	547,284
	Ilha Redonda	Marine	78,662
	Japeri	Onshore	37,650
	Volta Redonda	Onshore	25,502
	Cabiúnas	Onshore	483,134
Rio Grande do Norte	Guamaré	Marine	258,309
	Niterói	Marine	21,189
Rio Grande do Sul	Rio Grande	Marine	101,695
	Osório	Marine	842,394
	Biguaçu	Onshore	36,214
Santa Catarina	Itajaí	Onshore	56,482
	Guaramirim	Onshore	18,644
	São Francisco do Sul	Marine	473,166
Sergipe	Aracaju	Marine	156,940
	Santos	Marine	389,080
	São Sebastião	Marine	2,057,557
São Paulo	Barueri	Onshore	206,461
	Cubatão	Onshore	161,102
	Guararema	Onshore	1,026,935
	Guarulhos	Onshore	164,181
	Paulínia	Onshore	274,608
	Ribeirão Preto	Onshore	50,886
	São Caetano do Sul	Onshore	227,501
TOTAL	40	—	9,975,399

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 was completed in 2021. This action plan, aimed at improving the operational availability indicator, resulted in a reduction in the average age of the fleet from 13.57 years to 7.31 years in 2021.

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

1,852
mbbl/d

Come from
the production
of our refineries

213
mbbl/d

Were imported



Consumption

We Sold
An average of

1,806
mbbl/d

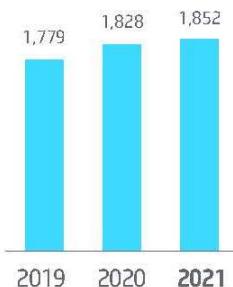
Of oil product
for the Brazilian
market

236
mbbl/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.

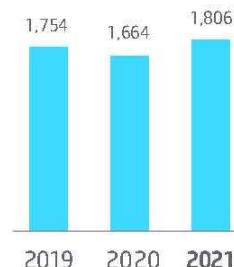
Oil Products Production
(mbbl/d)



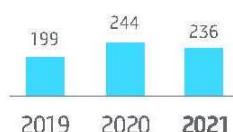
Import of Oil Products
(mbbl/d)



Brazilian Market Sales
(mbbl/d)



Export of Oil Products
(mbbl/d)



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



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 2021, the mandatory level of biodiesel in the fuel increased from 12% to 13%. However, due to the lack of raw material for the manufacture of the renewable fuel and rising prices, the national regulatory agency ("ANP") temporarily reduced that percentage to 10% from May to August, raised to 12% in September and October, and reduced again to 10% in November and December. For 2022, the National Energy Policy Council ("CNPE") decided to maintain the 10% biodiesel content in diesel for the entire year.

The increase in diesel oil sales in 2021 was mainly associated with the increase in its market share, as a result of commercial actions. Other important factor was the economic recovery, especially in the industrial sector, although this growth was largely due to the depreciated base in 2020, notably after the beginning of the Covid-19 pandemic. Sectors such as the manufacturing industry and retail trade, played an important role in the increase in consumption of this product. Other positive points for the consumption growth were the increase in sales for use in thermal plants and, of course, the reduction in the average content of biodiesel.

In 2021, we reached an annual record for production and sales of low-sulfur S-10 diesel. There was a 34.7% increase in product sales compared to 2020, with the sale of 25.8 million m³, and a 10% increase in production, which reached 21.2 million m³. Currently, the sale of the S-10 corresponds to more than half of our total diesel sales.

The record sales of S-10 Diesel and the growth in total Diesel sales reflect the commercial and operational actions that we have implemented in order to mitigate the effects of the Covid-19 pandemic on fuel demand and the successful efforts to expand the supply of the product with lower sulfur content, replacing the S-500 Diesel.

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 2021, the "gasoline A" share in Brazilian Cycle-Otto market was about 53%.

The main factors for the sales growth were the gain in gasoline participation over hydrated ethanol in flex fuel vehicles consumption, associated with the fall in the sugarcane crop that limited the supply of ethanol, and also the low comparison basis in 2020, due to the mobility restrictions imposed by the Covid-19 pandemic in 2020.

Another very important factor was the increase in our market share in the Brazilian gasoline market, as a result of commercial actions.

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 70% of LPG is sold by distributors bottled in cylinders of up to 13 kg and primarily used for residential cooking and its 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 (30%) comes mainly from industrial and services sectors, whose demand is driven by economic growth. The drop in LPG sales in 2021 was mainly associated with the increase in the supply by others players, and the positive effect of Covid-19 pandemic on the LPG consumption for cooking in 2020, which has contributed to increase the basis of comparison.

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, prior to the Covid-19 pandemic, domestic flights comprised up to 60% of Brazilian jet-fuel demand, and the remaining 40% of jet-fuel demand came from international flights. Jet-fuel demand is strongly correlated with GDP growth, as it directly affects the demand for travel – business and leisure.

The main factor behind the rise of sales in 2021 was the decrease of restrictions on mobility imposed by the Covid-19 pandemic, which had strongly impacted the Brazilian market. In April 2020, for example, the sales volume of jet fuel was less than 10% compared to the previous year.

Domestic flights sales gradually recovered due to the decline in cases and deaths caused by the Covid-19 pandemic in Brazil, mainly in the second half of 2021. The reopening of international borders to the country also contributed to the increase in international flights.

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 2021, industrial use of fuel oil represented around 60% of demand, while the use in power generation represented only 40%.

In 2021, the main factor for the significant sales growth was the increase in deliveries of fuel oil for use in thermoelectric plants. The objective was to recover water reservoirs of the Southeast / Midwest subsystem, as well as supplement the energy supply in moments of low wind generation in the Northeast Region of Brazil.

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 drop in naphtha sales in 2021 was mainly associated with the decrease in deliveries to Braskem's plants in Rio Grande do Sul and Bahia states, due to new contracts with the petrochemicals in force with Braskem since December 2020, where the committed quantities were lower than the previously negotiated. In the São Paulo state hub, where we are Braskem's only supplier, there was a decline in sales due to the plant's scheduled stop for maintenance in April and May.

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

BRAZILIAN SALES VOLUMES AND EXPORTS (mbbl/d)

	2021	2020	2019
Total oil products	1,806	1,663	1,738
Ethanol, nitrogen fertilizers, renewables and other products	28	8	7
Natural gas	352	292	350
Total Brazilian market	2,186	1,963	2,095
Exports ⁽¹⁾	811	957	735
TOTAL BRAZILIAN MARKET AND EXPORTS	2,997	2,920	2,830

(1) Mainly includes crude oil and oil products.



Oil products prices

Crude oil is a commodity, the value of which depends on its quality, usually based on its API gravity. Traditionally, lighter crude oils have greater added value than heavier ones, given that they 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 refineries with more complex hardware. In addition, oils with similar yields and physical properties have a greater market value if they have lower sulfur content. Different refineries assign different values to the same crude oil, depending on their conversion capacity and the value of the products they intend to produce to supply their specific markets. Refineries can process a variety of crude oils, which brings competition among different grades.

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

Refined oil products are commodities and their prices in different regions of the global market are driven by the local balance between supply and demand, crude oil prices and crack spread. Crack spread refers to the overall pricing difference between a barrel of crude and the oil products refined from it. It is an industry-specific type of gross processing margin. "Crack" is a term used in the oil industry that represents the ability of a crude to produce different products such as gases like propane and butane; light distillates like naphtha and gasoline; middle distillates like kerosene, gasoils and diesel fuels; and heavy distillates like heavy fuel oil and asphalt. 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 the 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 any particular oil product may result 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 subject to local conditions.

Our current pricing policy in Brazil takes into account domestic market conditions and seeks to align the price of oil products with international prices, while avoiding the immediate transfer of volatility of international quotations and the exchange rate caused by conjunctural issues. 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 adjusted our fuel prices according to international price parity as global oil prices changed and settled at new levels.

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.

According to our pricing policy, 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.

During 2021, we announced adjustments to selling prices at refineries, resulting in price increases of 68.2% for gasoline and 65.1% for diesel, when comparing prices in place on December 31, 2021 with those effective as of December 31, 2020.

LPG

LPG prices in the Brazilian market are defined taking into account the import parity price and margins to remunerate the risks inherent in the operation, in the residential and industrial/commercial LPG segments. According to our pricing policy, price adjustments are made without defined periodicity, according to market conditions and analysis of internal and external environments.

During 2021, we announced adjustments to selling prices at refineries, resulting in price increases of 47.6% for LPG, when comparing prices in place on December 31, 2021 with those effective as of December 31, 2020.

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 fulfill our contracts in order to balance any shortfall between production from our Brazilian refineries and the market demand for each product.

In 2021, net exports decreased by 299 bbl/d, reaching 444 bbl/d. This decrease resulted mainly from a reduction in crude oil exports and an increase in diesel imports.

EXPORTS AND IMPORTS OF CRUDE OIL AND OIL PRODUCTS (mbbl/d)

	2021	2020	2019
Exports			
Crude oil	575	713	536
Fuel oil	197	194	133
Other oil products	39	50	66
Total exports	811	957	735
Imports			
Crude oil	154	97	168
Diesel	118	18	70
Gasoline	20	10	28
Other oil products	75	89	88
Total imports	367	214	354

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 Houston, Singapore and Rotterdam and are comprised of crude oil and product traders, shipping and support operators.

For more information on our oil and oil products clients, see “– Exploration and Production – Customers and Competitors” and “Refining, Transportation and Marketing – Customers and Competitors” in this annual report.

Distribution

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

In July 2021, we completed the sale of our entire remaining stake in BR Distribuidora, leaving the distribution sector in Brazil. Following the sale, BR Distribuidora changed its name to Vibra Energia S.A. ("Vibra").

Even after completing the sale of our shareholding in Vibra, 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 Vibra 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 in 2019 and amended in June 2021 to incorporate changes necessary for both companies. The contract expires in June 2029 and is renewable for an additional 10-year period, subject to agreement between the parties.

Under the terms of this agreement, the license is granted exclusively to the service station and aviation segments, for which Vibra shall exclusively use the brands licensed by us. Meanwhile, during the term of the trademark license agreement, we undertake to refrain from operating in the service stations sector 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.

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

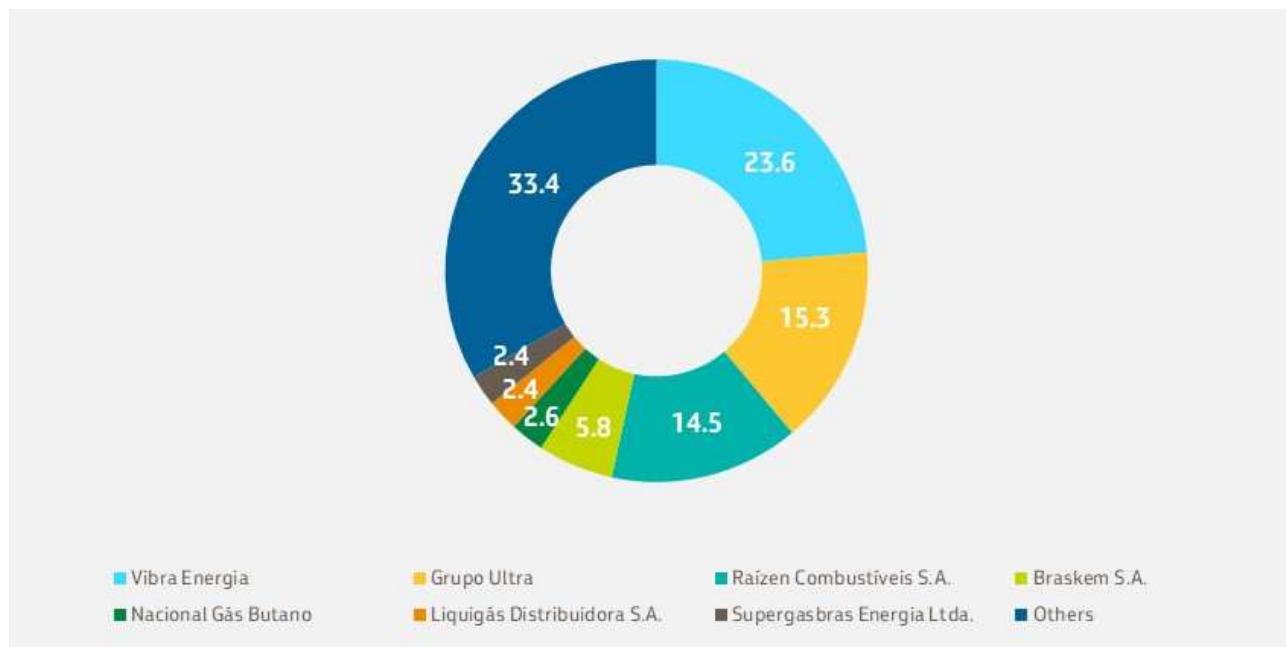
- **Colombia:** Our operations through Petrobras Colombia Combustibles S.A. (PECOCO) include 125 service stations and a lubricant plant with a production capacity of 54,000 m³/year. In June 2020, we announced the binding phase of PECOCO's divestment process;
- **Uruguay:** Until February 2021, our operations included 88 service stations. In February 2021, we sold our stake in Petrobras Uruguay Distribución S.A. (PUDSA) and ended the distribution operations 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:** Following the sale of our distribution operations in Paraguay, which was concluded in March 2019, we entered into a brand licensing agreement in Paraguay. Our operations were sold to Paraguay Energy, a subsidiary of Copetrol Group and 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 approximately 470 clients in Brazil, in regard to liquid oil products, seven of which account for 67% 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 12 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 2021, our participation in diesel and gasoline markets increased compared to the previous year, mainly due to commercial actions.

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
Braskem				
Ethylene	Brazil	5.00		Novonor (38.32%)
Polyethylene	Brazil	3.06		Others (25.53%)
	Mexico	1.05		
Polypropylene	Brazil	1.85	36.15%	
	USA	2.02		
	Germany	0.63		
DETEN Química S.A.				
LAB ⁽¹⁾	Brazil	0.22		Petresa (69.78%);
LABSA ⁽¹⁾		0.12	27.88%	Others (2.34%)
METANOR S.A./COPENOR S.A.⁽²⁾				
Formaldehyde	Brazil	0.09	34.34%	Dexxos Participações (45.47%); Others (19.99%)
Hexamine		0.01		
FCC Fábrica Carioca de Catalisadores S.A.				
Catalysts	Brazil	0.04		Albemarle (50.00%)
Additives		0.01	50.00%	
PETROCOQUE S.A.				
Calcined petroleum coke	Brazil	0.55	50.00%	Universal Empreendimentos e Participações Ltda (50.00%)

(1) Feedstock for the production of biodegradable detergents.

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

In September 2021, we announced the binding phase for Deten Química S.A. For more information see “– Portfolio Management” in this annual report.

In December 2021, we approved the model for the sale of up to 100% of our preferred shares in Braskem S.A. (Braskem), by means of secondary public offering(s) of shares (follow-on), together with Novonor S.A. - In Judicial Recovery and NSP Investimentos S.A. - In Judicial Recovery (both referred to as Novonor).

In January 2022, we decided with Novonor to cancel the public offering for secondary distribution of shares, due to the instability of the conditions in the capital markets, where levels of demand and price were not appropriate for proceeding with the transaction.

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 and sulfur.

In line with our risk management policy associated with the management of contingencies and with the strategy of generating value through the negotiation of amounts in dispute, we and ANP reached an agreement at the end of 2021 to close all legal and administrative proceedings related to the collection of royalties and administrative fines arising from the oil shale mining carried out by us at SIX. The execution of the definitive agreement with the ANP is subject to regulatory approvals after a public hearing to be conducted by ANP. We expect to sign this agreement by May 2022.

The agreement encompasses both the conclusion of administrative and judicial disputes and the execution of a concession agreement, aiming to regulate the granting of shale exploration and mining rights granted to us.

In the agreement, the ANP undertake to adopt a royalty rate of 5% as of the validity of the concession agreement (for 27 years, renewable for another 27-year term) and to no longer claim from us any royalties collected by us related to the SIX's, as well as any fines and/or penalties and/or late payment additions prior to signing the agreement.

Under the agreement, as of December 2021 we undertake to pay US\$103 million, representing a 48% discount in relation to the total amount in dispute.

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.

In November 2021, we signed an agreement with Forbes & Manhattan Resources Inc. for the sale of SIX. The transaction is subject to the satisfaction of conditions precedent, such as approval by the CADE and by the ANP. Until the conditions precedent are met and the transaction is closed, we will maintain normal operation of the unit.

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.

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

Biofuels



BioRefino 2030

In 2020, we launched the BioRefino 2030 Program which aimed to transform its refining processes into a more sustainable industry, in line with a low-carbon based economy. In 2021, we accelerated our projects for the generation of new, modern and sustainable fuels, such as renewable diesel and biojet.

Diesel with a renewable content is an advanced biofuel, produced from coprocessing conventional diesel with vegetable oils using our proprietary HBIO™ technology. The renewable part of resulting

fuel (Hydrotreated Vegetable Oil or "HVO") presents the same structure as conventional diesel fuel and, according to reports from the Biodiesel Producers Association, reduces the emission of greenhouse gases by 70% compared to mineral diesel oil. Coprocessed diesel with a renewable content, as well as pure HVO, are free from 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 depends on a new regulation to be issued by the ANP.

BioQAv (also known as Synthetic Aviation fuel or BioJet fuel) will be used worldwide to reduce the emissions of greenhouse gases in the aviation sector. This was determined by the International Civil Aviation Organization 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 HVO, which is also produced as a coproduct of this process.

We also operate in the production of biodiesel through our wholly owned subsidiary PBIO, 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 a mandatory blend of biodiesel in all diesel sold in Brazil. In 2021, CNPE fixed a 13% blend on or after March 2021, with gradual scheduled increases of 1% per year, until it reaches a mandated 15% in 2023. However, in November 2021 the CNPE published Resolution No. 25, which changed the previous percentage of blend by establishing a mandatory blend of 10% for 2022.

PBIO has three biodiesel plants for its own operations. However, the Quixadá biodiesel plant is in a hibernation state since November 2016. Our biodiesel production capacity in the other two plants in operation is 8.63 mbbl/d. In 2021 we supplied 4% of Brazil's biodiesel demand, according to the ANP.

PBIO 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 PBIO's entire stake in BSBios to RP Participações em Biocombustíveis S.A. ("RPBio"), which owned the remaining 50% stake in BSBios.



Main Assets

	2021	2020	2019
Biofuels			
Biodiesel production units - PBIO	3	3	3
Biodiesel production capacity (mbbl/d) - PBIO	10.5	10.5 ⁽²⁾	10.0 ⁽²⁾
Biodiesel production units - BSBios	N/A ⁽¹⁾	2	2
Biodiesel production capacity (mbbl/d) - BSBios	N/A ⁽¹⁾	14.3 ⁽³⁾	12.1 ⁽³⁾

(1) In February 2021, the sale of PBIO's entire stake in BSBios to RPBio was concluded.

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

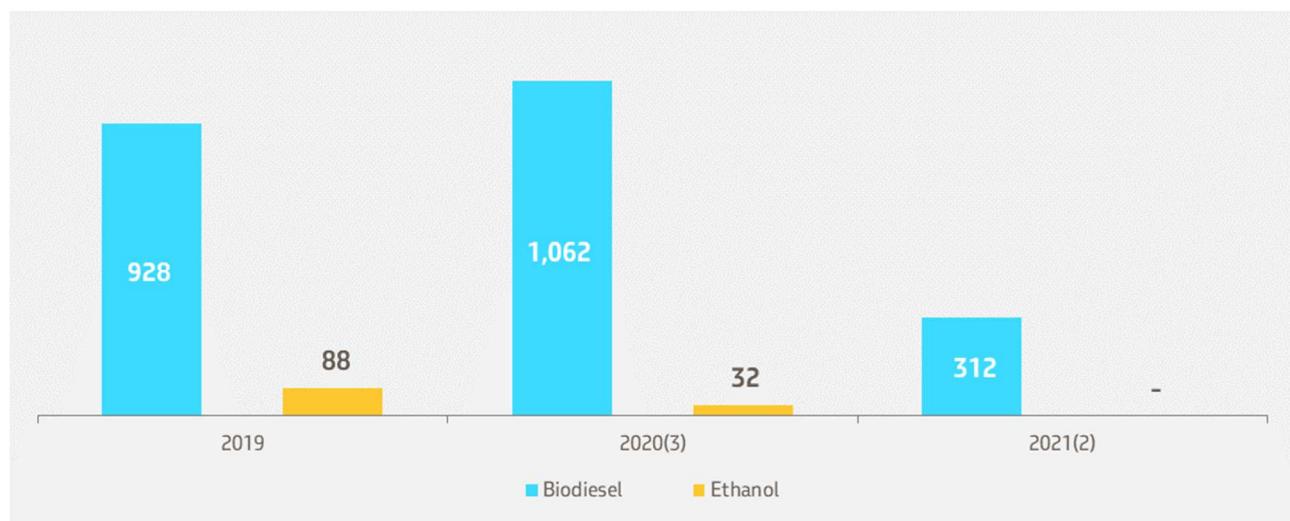
(3) Includes total production capacity in two plants in which we have 50% interest through BSBIOS Sul Brasil.

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. Prior to the divestment, Turdus and Bambuí initiated an arbitration process against PBIO; later, we replaced PBIO as the defendant part in the arbitration process, which is still in progress. 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.

BIOFUELS PRODUCTION⁽¹⁾ (thousand m³)



- (1) Includes 100% of the volume of our equity method investees (net production of PBIO in biodiesel, considering PBIO share in the investee, was 67.4% in 2019, 64.5% in 2020, and 75.4% in 2021; net production of PBIO in ethanol was 8.4% of total)
(2) Biodiesel production figure for 2021 is updated as of February 9, 2020, the date on which we sold our share in BSBios
(3) Ethanol production figures from 2020 are as of July 10, 2020, the date in which we sold our share in Bambuí, our investee in this segment

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 103.6 million m³/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

	2021	2020	2019
Natural gas			
Gas pipelines in Brazil (km)	2,643 ⁽²⁾	4,686 ⁽¹⁾	9,190
Processing Units	22	22	22
Brazil	19	19	19
Bolivia	3	3	3
Processing capacity (million m ³ /day)	149	149	149
Brazil	105	105	105
Bolivia	44	44	44
Regasification terminals	3	3	3
Regasification capacity (million m ³ /day)	47	47	47
Power			
Number of thermal power plants	15 ⁽³⁾	20	20
Installed capacity (thousand MW)	5.4	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.

(2) In April 2021, we concluded the sale of our remaining 10% interest in Nova Transportadora do Sudeste S.A. (NTS), which has 2,043 km of pipelines.

(3) In November 2021, we concluded the sale of our participation in Breitener Energética S.A, which has two thermoelectric plants: Jaraqui and Tambaqui. In December 2021, we concluded the sale of three thermal power plants: Bahia 1, Muricy and Arembepe.



Natural Gas

Our Gas and Power segment comprises gas processing, transportation and distribution, LNG regasification (Ceará, Bahia and Rio de Janeiro states), 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 and withdraw completely from gas distribution and transport.
- Optimize the thermoelectric portfolio focusing on self-consumption and trading of its own gas.

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.

In January 2022, we approved the sale of our stake in the Potiguar Cluster, which includes, among its assets, the AIG (Former RPCC). Until the conditions precedent are met and the transaction is closed, we will continue to operate the assets.

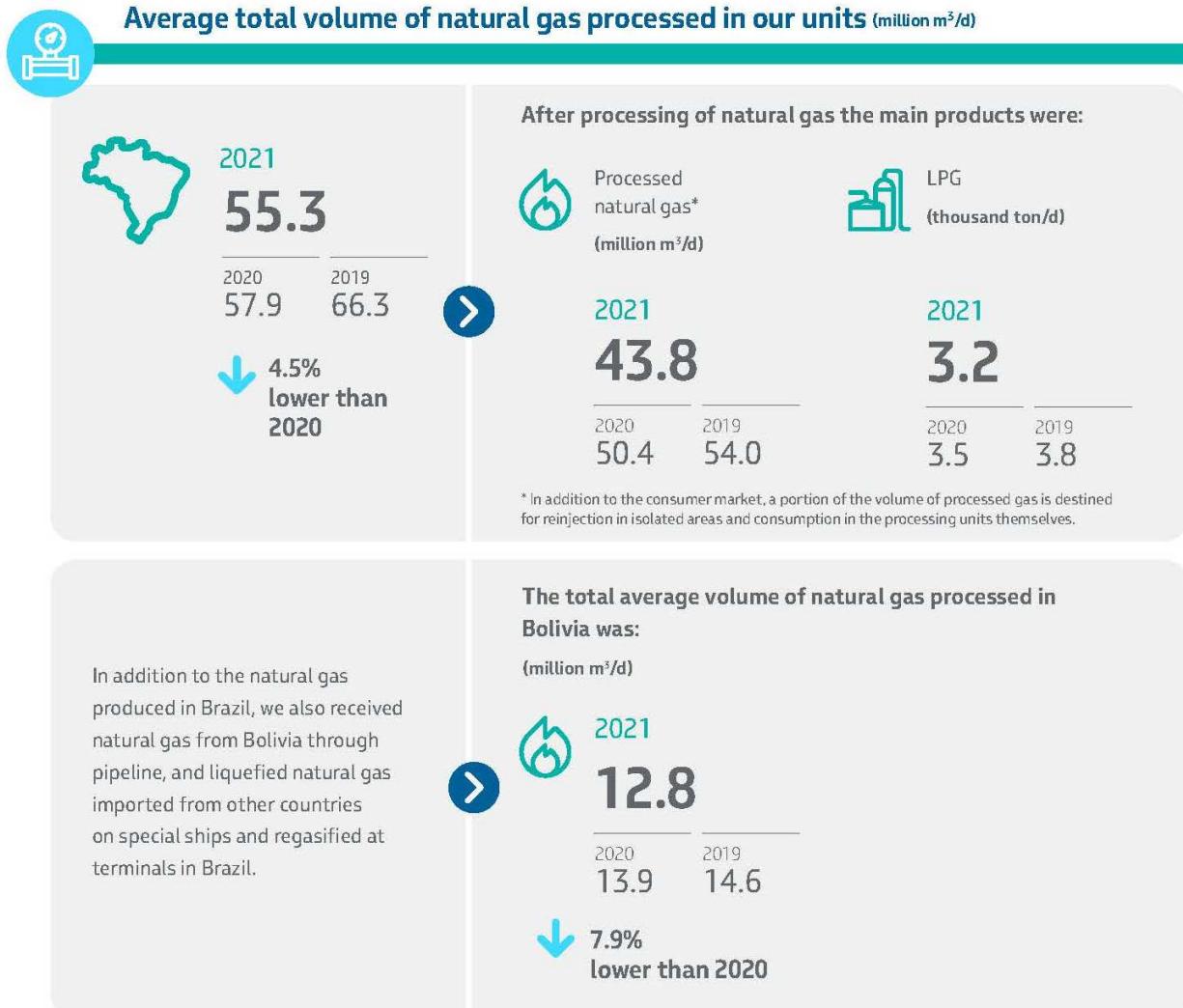
The current processing capacity and production of our UPGNs in Brazil is:

PROCESSING CAPACITY AND PRODUCTION OF OUR UPGNS IN BRAZIL

	Location	Number of units	Processing capacity (million m ³ /d)	2021			2020			2019		
				Unprocessed natural gas (million m ³ /d)	Processed natural gas (million m ³ /d)	LPG (thousand t/d)	Unprocessed natural gas (million m ³ /d)	Processed natural gas (million m ³ /d)	LPG (thousand t/d)	Unprocessed natural gas (million m ³ /d)	Processed natural gas (million m ³ /d)	LPG (thousand t/d)
UTGCAB	Rio de Janeiro	1	24.6	21.65	15.55	0.86	22.58	17.54	0.98	23.37	17.35	0.71
UTGCA	São Paulo	1	20.0	11.17	10.64	0.72	12.43	11.84	0.62	14.68	14.03	0.70
UTGC	Espírito Santo	1	18.1	3.29	2.97	0.44	3.98	3.50	0.59	4.89	4.36	0.82
UTGSUL	Espírito Santo	1	2.5	0.31	0.26	-	0.48	0.46	-	0.58	0.57	-
REDUC	Rio de Janeiro	1	2.2	1.19	0.90	0.02	1.05	0.93	0.05	1.46	1.02	0.06
RPBC	São Paulo	1	2.2	-	-	-	0.08	-	-	0.46	0.43	-
LUBNOR	Ceará	1	0.35	-	-	-	-	-	-	-	-	-
URUCU	Amazonas	4	12.20	11.85	11.09	1.00	11.61	10.81	1.08	12.10	11.56	1.21
GUAMARÉ	Rio Grande do Norte	3	5.70	0.53	0.47	0.09	0.69	0.63	0.1	1.36	1.25	0.15
PILAR	Alagoas	1	1.80	1.03	0.98	0.05	1.24	1.20	0.07	1.24	1.19	0.07

ATALAIA	Sergipe	1	3.00	0.00	0.00	0.00	0.21	0.20	0.02	0.78	0.73	0.06
CATU	Bahia	1	2.00	1.16	0.95	0.00	1.22	1.06	-	1.57	1.45	-
CANDEIAS	Bahia	1	2.90	-	-	-	-	-	-	-	-	-
EVF MANATI	Bahia	1	6.00	3.12	-	-	2.32	2.20	-	3.54	-	-
TOTAL		19	103.55	55.30	43.81	3.18	57.89	50.37	3.51	66.33	53.95	3.78

- (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

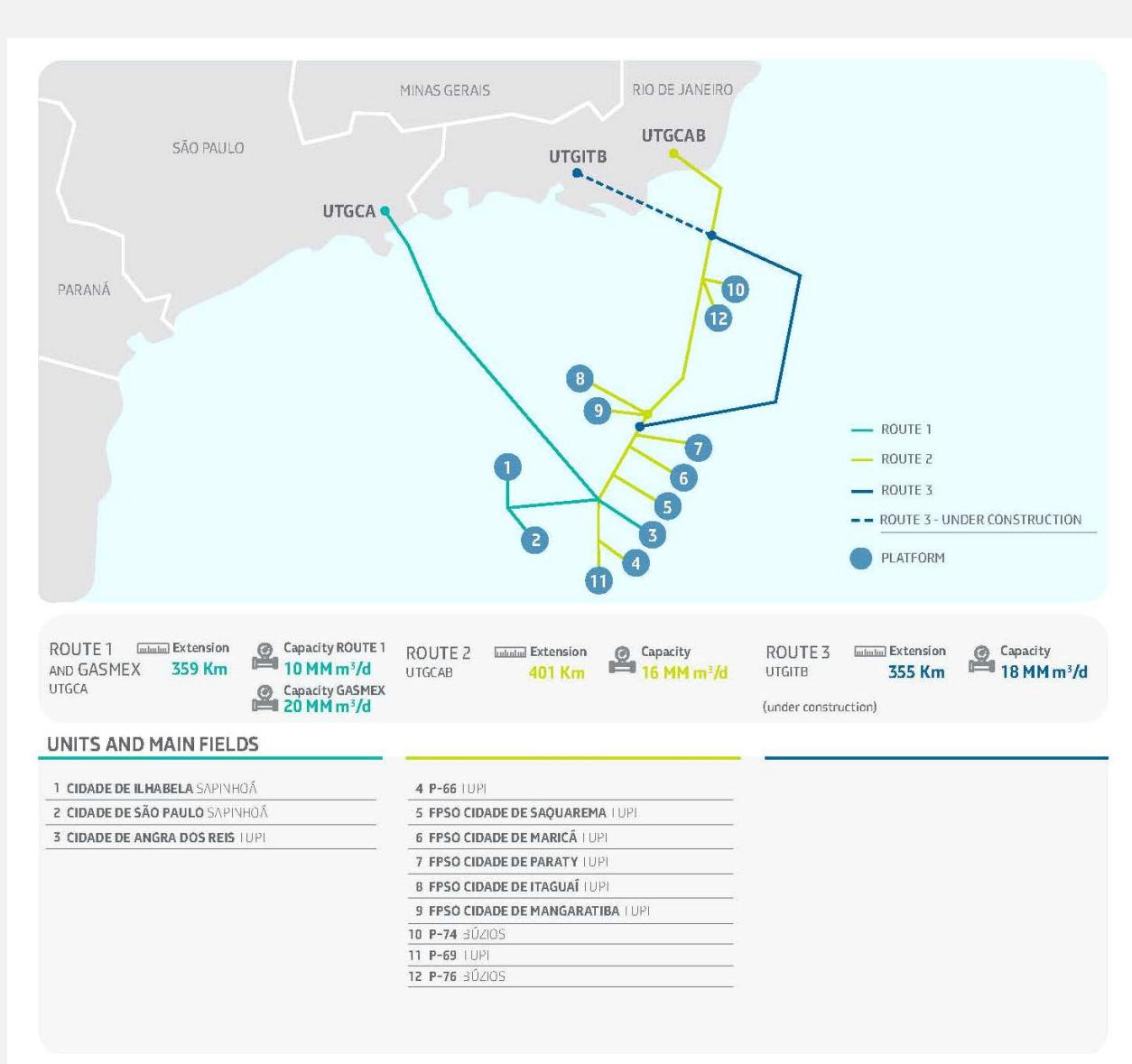
Company	Gas pipeline extension (km)	Our shareholding	Other shareholders
Transportadora Brasileira Gasoduto Bolívia Brasil S.A ("TBG")	2,593	51%	BBPP Holdings Ltda. (29%) YPFB Transporte do Brasil Holding Ltda. (19,88%) Corumbá Holding S.À.R.L. (0,12%)
Transportadora Sulbrasileira de Gás S.A. ("TSB")	50	25%	Ipiranga Produtos de Petróleo S.A. (25%), Repsol Exploração Brasil (25%) e Total Gas and Power Brazil (25%)
TOTAL	2,643	—	—

In 2021, we concluded the sale 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 GASMEC: 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 m³/d, and GASMEC, 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 m³/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 Cabiunas Gas Treatment Unit ("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 m³/d, which then increased to 16 million m³/d. In July 2019, the ANP authorized the pipeline to operate with 20 million m³/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 Repsol 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 m³/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 m³/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-68) 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 we delivered in 2021 was 84.5 mmm³/d. The volume of our natural gas consumption by industrial, gas-fired electric power generation, commercial and retail customers in 2021 was 71.9 mmm³/d, representing an increase of approximately 31.4% compared to 2020. This increase is mainly attributable to a relative economic recovery in 2021, due to lower Covid-19 cases and increase in gas-fired power plants demand, due to the low levels of water reservoirs (year 2021 with the worst dry season in 90 years).

In 2021, the consumption of natural gas by our refineries was 12.6 mmm³/d, representing a small decrease compared to 2020.

Below we present our sources and consumption in 2021:

Sources*

TOTAL SUPPLY
NATURAL GAS

43.1
(million m³/d)

originated from
Brazilian production

19.7
(million m³/d)

Imported
from Bolivia

22.6
(million m³/d)

LNG imports were subject to
regasification at the LNG terminals in
Pecém (CE), at Baía de Guanabara (RJ)
and in Bahia (BA)

Consumption

WE SUPPLY
(million m³/d)

The average of

84.5
natural gas

12.6
for the internal
consumption
of our units

71.9
to the market

1.0
was consumed
by the natural
gas transporters
hired by us for
the provision of
transport service

WE SELL

Through

34
agreements
with

19
distribution
companies

both for the
thermoelectric
segment, as for
the non-thermal
segment, including
cogeneration units.

Additionally, we
serve two free
consumers

TOTAL VOLUME DELIVERED
(million m³/d)

We delivered

31.7
to the thermoelectric market
(includes our units and third
party units)

12.6
to the refinery units and
fertilizer manufacturers

40.1
to the gas distributors
for supplying the
non-thermoelectric market

1.0
to the natural gas
transporters

Natural Gas Supply
(million m³/d)



Demand for Natural Gas
(million m³/d)



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

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 infographic below shows all the initiatives implemented in 2021 and those still in progress in 2022.

OPENING THE GAS MARKET

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

Completed Actions in 2021

APR/21 ● Divestment of our 10% stake in NTS (Closing).

JUL/21 ● Divestment of our 51% stake in GASPETRO (Signing).

SEPT/21 ● Leasing of the Regasification Terminal in Bahia (TR-BA)

- Publication of an external website for the dissemination of information on access to natural gas outflow infrastructure by third parties.

NOV/21 ● Signing of Guamaré's processing and access agreement, allowing the natural gas outflow system of Guamaré can be accessed by third parts.

DEC/21 ● Petrobras' flexibility reduction agreement signed with TAG.
● Signing of an Agreement and Amendments to the GTA Malha NE, GTA Pilar Ipojuca e GTA Gasene in order to reduce the flexibility contracted¹ by Petrobras in those contracts and allow TAG to offer the remaining pipeline capacity to other companies. As a result of this, TAG has signed entry and exit contracts with 9 companies in the total amount of 11,256 million m³/day.

Actions in Progress in 2022



Negotiations with NTS concerning the reduction of the flexibility contracted by Petrobras in the GTAs to reflect the indication of the capacities for the Entry/Exit system².



Negotiation of third party access to the gas outflow systems.



Negotiation of third party access to gas treatment plants, to allow part of the natural gas processing and gathering facilities can be accessed by other market players.

¹) Flexibility contracted is the additional gathering and processing capacity not used by Petrobras that can be taken by third parts.

²) 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.

Additionally, in 2020, we initiated the GAS + Program, which aims to increase our competitiveness in the natural gas segment within Brazil's current conditions of market opening. This program includes the launch of 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 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, and 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.

Throughout 2021, several initiatives of the GAS + Program were implemented. The development of these initiatives is periodically monitored, at different management levels, following the established project management structure. The main achievements of the referenced period are highlighted below.

Associated with the market relationship front:

- Design of a negotiated access framework to our gas processing infrastructure.
- Development of new commercial products for natural gas customers, network balancing products, flexible and short-term products offering.
- LNG supply prospecting for A-4 / A-5 power auction.

Associated with the digital transformation of assets and businesses front:

- Progress in implementation of new CRM - Customer Relationship Management (Projeto Evoluir).
- Deployment of digital tools for operational support as alarm management system (BR Alarm) and personal digital assistants – PDAs (“Conf Online”) in 13 assets.

Associated with the high-performance assets front:

- Licensing of Baía de Guanabara LNG regasification terminal for operation at 30 MM m³/d.
- Conclusion of gas turbine technical upgrade at the Termobahia power plant.
- Progress of retrofit projects at Cabiúnas gas treatment unit.

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 64% 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.

Throughout 2021, we entered into new commitments to supply natural gas, totaling a commitment for 2022 around 26.4 million m³/day with local distribution companies and 3.1 million m³/day with Free Consumers.

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 Petrolíferos Fiscales Bolivianos (“YPFB”), to purchase certain minimum volumes of natural gas at prices linked to the global fuel oil price. The supply of gas under the GSA began on July 1, 1999.

The GSA will terminate upon delivery to YPFB of all contracted quantity. Considering the contractual balance as of December 31, 2021, and depending on the level of gas withdrawn, we estimate that the GSA will terminate between May 2024 and April 2025. The analyses for this estimate considered the maximum withdrawal of the contracted quantity (20 million m³/day) and the minimum purchase obligation (14 million m³/day).

In October 2021, we and YPFB entered into Amendment No. 09 to the GSA, which provided for the provisional inclusion by us, until the end of 2021, of a second delivery point to supply natural gas to the Cuiabá Thermolectric Plant, in Mato Grosso State.

The table below shows these contractual commitments under the above agreements for the five-year period from 2022 through 2026.

FUTURE COMMITMENTS UNDER NATURAL GAS SALES CONTRACTS (million m³/d)

	2022	2023	2024	2025	2026
To non thermelectric clients:					
Related parties ^{(1) (2) (3)}	0.00	0.00	0.00	0.00	0
Third parties ^{(2) (3)}	29.53	26.09	7.64	6.99	0
To gas-fired power plants:					
Related parties ^{(1) (2) (3)}	9.89	8.00	8.20	6.46	7.25
Third parties ^{(2) (3)}	7.95	5.82	5.69	5.61	5.60
Total^{(1) (2) (3)}	47.36	39.91	21.53	19.05	12.85
Estimated amounts to be invoiced (US\$ billion) ⁽³⁾⁽⁴⁾	6.72	5.68	2.50	1.95	1.27
Purchase Commitments					
Purchase commitments to YPFB					
Volume obligation (mmm ³ /d) ⁽⁵⁾	14.00	14.00	14.00	14.00	0
Volume obligation (mmcf/d) ⁽⁵⁾	494.41	494.41	494.41	494.41	0
Brent Crude Oil projection (US\$) ⁽⁶⁾	77.43	79.49	60.00	55.00	0
Estimated payments (US\$ million) ⁽⁷⁾	1,098.96	1,124.79	883.31	232.58	0
Transportation Commitments					
Ship-or-pay contract with GTB					
Volume commitment (mmm ³ /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) ⁽⁸⁾	0.40	0.40	0.40	0.40	0.48
Ship-or-pay contract with TBG⁽¹⁰⁾⁽¹¹⁾					
Volume commitment (mmm ³ /d) ⁽⁹⁾	11.20	11.20	11.20	11.20	11.20
Volume commitment (mmcf/d)	395.53	395.53	395.53	395.53	395.53
Estimated payments (US\$ million) ⁽⁸⁾	5.89	5.95	5.97	5.95	6.74
Ship-or-pay contract with NTS⁽¹⁰⁾					
Volume commitment (mmm ³ /d)	158.21	158.21	158.21	158.21	114.40
Volume commitment (mmcf/d)	5,586.96	5,586.96	5,586.96	5,586.96	4,040.00
Estimated payments (US\$ million) ⁽⁸⁾	1,329.62	1,364.75	1,394.80	1,390.99	1,024.76
Ship-or-pay contract with TAG⁽¹⁰⁾					
Volume commitment (mmm ³ /d)	74.28	73.58	73.58	73.58	52.00
Volume commitment (mmcf/d)	2,623	2,598.4	2,598.4	2,598.4	1,836.19
Estimated payments (US\$ million) ⁽⁸⁾⁽¹²⁾	1,587.16	1,630.2	1,666.11	1,661.56	1,302.65

(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 contracts signed as of December 31, 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 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.

(12) The estimated payments from Petrobras to TAG will be monthly reduced in order to reflect the payments done by other companies to TAG in the gas transportation contracts signed as a result of the agreement of reduction of flexibility signed between Petrobras and TAG in December 2021.

Distribution

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

We hold a 51% interest in Gaspetro, a holding company that, in March 2022, consolidates our equity interests in 18 of the 27 state natural gas distributors. Mitsui holds the remaining 49% interest. In April 2021, we announced the sale of Gaspetro's interests in one of these distributors (GASMAR) to Termogás S.A. which occurred in February 2022. Following our commitment with CADE, in July 2021, we signed the sale of our interest in Gaspetro to Compass Gás e Energia S.A. The conclusion of the sale is contingent on CADE approval. Once the sale is concluded we will no longer hold activities in the gas distribution sector.

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

In 2021, of the total of 38.49 million m³/d of gas sold to distributors, 39% 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 15 thermoelectric power plants that we own or lease, operating under the authorization regime as an independent power producer. They are powered by natural gas or diesel, with a total installed capacity of 5,375 MW. These plants are designed to supplement power from the hydroelectric power plants.

In 2021, the total electricity generated in Brazil, according to the ONS, was 68,694 MWavg. Our thermoelectric power plants contributed 3,419 MWavg (1,756 MWavg in 2020 and 2,028 MWavg in 2019). This increase in total generated electricity was due to a severe drought in 2021, bringing the reservoirs of hydroelectric plants to low levels that required thermal generation.

In addition, we hold participation in other projects of power generation. This adds up to 215 MW to our electricity generation capacity.

SALES AND GENERATION OF ELECTRICITY⁽¹⁾

	2021	2020	2019
Electricity sales (ACL) – average MW ⁽²⁾	1,150	837	1,168
Electricity sales (ACR) – average MW	2,439	2,404	2,788
Electricity generation – average MW	3,419	1,756	2,028

(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 2021, the commercial capacity certified by MME for all thermoelectric power plants we control was 3,461 MWavg. Our total generating capacity was 5,490 MWavg. Of the total 4,248 MWavg of commercial capacity available for sale in 2021, approximately 58% was sold as standby availability in public auctions in the regulated market (compared to 57% in 2020) and approximately 27% was committed under bilateral contracts and self-production, i.e. sales to related parties, (compared to 20% in 2020).

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

	2021	2020	2019
Installed capacity (MW)	5,490	6,131	6,148
Certified commercial capacity (MWavg)	3,461	3,524	3,770
Purchases in the free market (MWavg)	787	693	391
Commercial capacity available (Lastro) (MWavg)	4,248	4,193	4,161

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

ELECTRICITY SOLD

	2021	2020	2019
Total sale commitments (MWavg)	3,605	3,242	3,958
Bilateral contracts	778	496	812
Internal consumption	372	342	356
Public auctions to distribution companies	2,455	2,404	2,788
Generation volume (MWavg)	3,419	1,756	2,028
Revenues (US\$ million)⁽¹⁾	3,710	1,855	2,334

(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 ⁽¹⁾	Region	Power Plant	Fuel ⁽¹⁾	Installed Capacity	Shareholding or PIE	Petrobras Capacity	Partners
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 Piratininga	NG	386	100%	386	-
6		Piratininga	NG	190	100%	190	-
7		Termorio	NG	1,058	100%	1,058	-
8		Juiz de Fora	NG/ET	87	100%	87	-
9		Três Lagoas	NG	386	100%	386	-
10		Termomacaé	NG	923	100%	923	-
11		Canoas	DO/NG	249	100%	249	-
12		Termobahia	NG	186	100%	186	-
13		Vale do Açu	NG	323	100%	323	-
14		Termoceará	NG/DO	220	100%	220	-
Petrobras Management				5,369	100%	5,369	
19	PV	Northeast	Solar Alto do Rodrigues	1	100%	1	-
Subtotal Petrobras Management				5,370		5,370	

Type ⁽¹⁾	Region	Power Plant	Fuel	Installed Capacity	Shareholding or PIE	Petrobras Capacity	Partners
1	Southeast/Midwest	Goiânia II	DO	140.3	30%	42	Enegen Participações S.A.: 70%; Petrobras: 30% Copel: 20.3%; Copel GeT: 60.9%; Petrobras: 18.8% Savana SPE Incorporação Ltda.: 80%, Petrobras: 20% 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%
2	South	Araucária	NG	484	18.80%	91	
3		Suape II	FO	381	20%	76	
4	Northeast	Termocabo	FO	50	12%	6	
Subtotal Petrobras Shareholdings				1,055		215	
TOTAL				6,424		5,584	

(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.

In November 2021, we announced the sale of our participation in Breitener Energética S.A., which has two thermoelectric plants (Jaraqui e Tambaqui). In November 2021, we also sold our participation in Companhia Energética Manauara ("CEM"), which has one thermoelectric plant and TEP Termoelétrica Potiguar S.A. ("TEP"), which has two hydroelectric plants and participation in CEM.

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

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

OUR CONTRACTS IN THE REGULATED MARKETING ENVIRONMENT

Region	Power plant	Contracted power (MWavg)	Contract expiration date
Southeast /Midwest	Baixada Fluminense	416.4	2033
	Seropédica	278.0	2023
		141.0	2024
	Cubatão	98.3	2025 to 2039
		64.2	2026 to 2040
	Termorio	704.0	2022 (352MW), 2024 (352MW)
	Três Lagoas	127.0	2023
	Ibirité	48.5	2022
Northeast	Termomacaé	200.0	2025
	Termoceará	141.0	2023 (64MW) e 2024 (77MW)
	Termobahia	100.0	2021
	Vale do Açu	90.0	2021

In addition to the sale in traditional energy auctions at the ACR, in December 2021, we participated in the 2021 Capacity Reserve Auction, selling 1,120 MW of available power from thermoelectric power plants of Termorio (RJ) and Ibirite (MG).

The amount of 922.35 MW from UTE Termorio were sold at a price of US\$152,759.21/MW/year, converted per rate of the auction (R\$876,685.12/MW/year) and 197.87 MW from UTE Ibirité at a price of US\$153,014.84 /MW/year, converted per rate of the auction (R\$878,152.17/MW/year). This price guaranteed a total fixed revenue of US\$157.1 million/year (R\$901.7 million/year) in the period from July 2026 to June 2041, in addition to the variable revenues that will come from the dispatch of these thermoelectric plants during the contract period.

We expect to sign the definitive agreements 25 business days after the publication of the notice of homologation of the results, which is expected to occur by April 14, 2022.

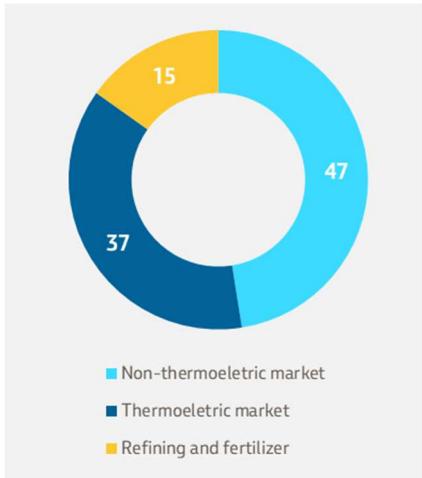
We also invested, independently and in partnership with other companies, in renewable power generation sources in Brazil. We held indirect interests in two small hydroelectric power plants (Areia and Água Limpa) through our associate TEP Termoelétrica Potiguar S.A. ("TEP"), and participated in joint ventures in four wind power plants (Mangue Seco 1, 2, 3 and 5). In 2021, we completed the sale of these assets, leaving the wind and hydro generation sector. Since May 2021, we own only a solar power plant, Unidade Fotovoltaica de Alto Rodrigues with 1 MW of solar capacity.

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

Customers and Competitors

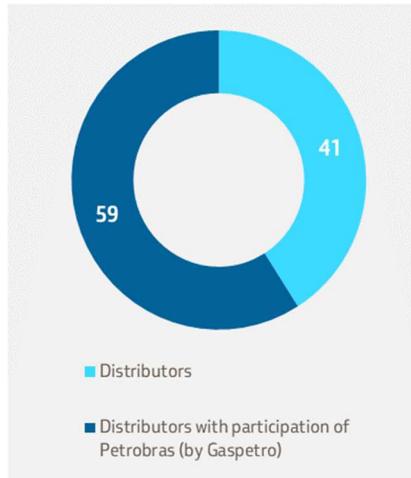
Natural gas is marketed to 21 clients, most of which are distributors. The entire demand for natural gas includes our non-thermoelectric, thermoelectric, refining and fertilizer markets, as well as the consumption by natural-gas carriers contracted by us for the provision of transportation services.

GAS CLIENTS (% vol)



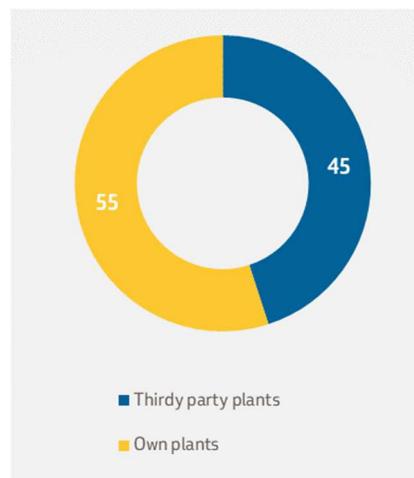
NON-THERMOELECTRIC

MARKET (% vol)



THERMOELECTRIC

MARKET (% vol)



In the power segment, we operate in the regulated market (power distributors) and free market (marketers and free consumers/large consumers). We have 133 clients and suppliers, of which 35 are distributors, 28 are marketing companies, 14 are generating companies and 56 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-owned 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 allowed selling prices to respond more quickly to international references, making them more competitive, as observed in the year 2020.

In 2021, mainly in the first quarter, some local distribution companies declared force majeure in their respective gas purchase contracts, due to a second wave of the Covid-19 pandemic. The effects of these declarations ended in May 2021.

Additionally, in 2021, the LNG market presented a global scenario that LNG prices increased sharply mainly due to the recovery of the global demand. The import of LNG is indispensable to meet our commitments made to the market.

Local distribution companies launched public calls for purchasing gas starting in 2022. We offered such distribution companies products with terms of six months, one year, two years and four years and contractual mechanisms to reduce price volatility, such as reference indexers linked to LNG and Brent, installment options and the possibility of reducing volumes in longer-term contracts.

Although we offered these contractual possibilities to local distribution companies, in December 2021 some legal injunctions were filed to maintain our natural gas supply at a reduced price from 2022 onwards.

We have obtained the suspension of a preliminary decision regarding the supply of natural gas to Ceará Gás ("CEGÁS"). We continue to appeal all other preliminary decisions. In the power 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

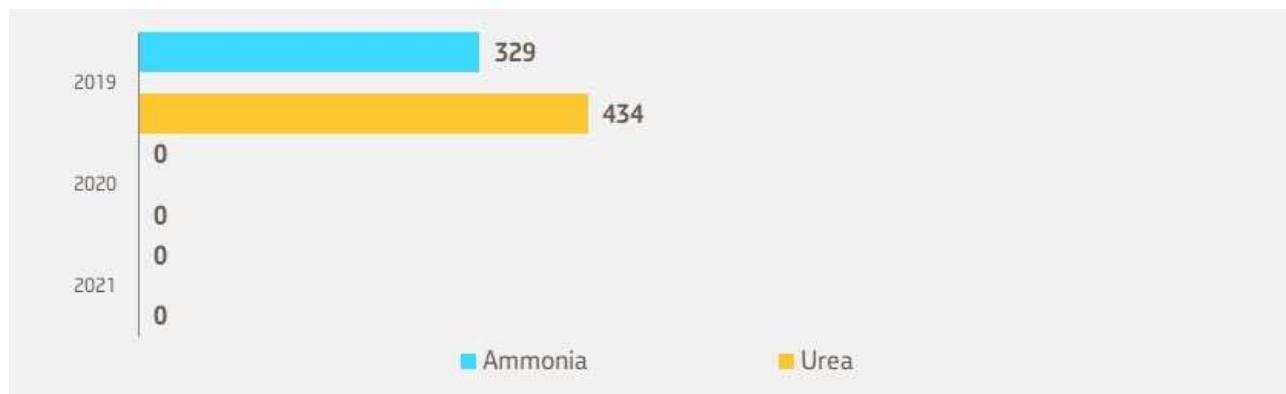
We have three fertilizer plants in Brazil, one located in the state of Bahia, ("FAFEN-BA"), and other in the state of Sergipe ("FAFEN-SE"), and one subsidiary located in Paraná, Araucaria Nitrogenados S.A. ("ANSA"). Their main products are ammonia and urea. Together these plants have an installed capacity 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. We also have an unfinished Nitrogen Fertilizer Unit (UFN-III) in Mato Grosso do Sul. The construction of UFN-III began in September 2011, but was halted in December 2014, with about 81% of the physical construction completed.

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. To this end, since August 2020, after being mothballed in 2019, our plants located in Bahia and Sergipe have been operating under a lease agreement with Proquigel Química S.A. ("Proquigel Química"), a company of the Unigel Group for an initial term of 10 years, which may be extended for an additional 10 years.

In January 2020 ANSA was mothballed, and since September 2020 we have started its divestment process, which is currently in its binding phase.

Additionally, since 2020 we have started the divestment process of UFN-III.

FERTILIZER PRODUCTION (thousand tons)



Portfolio Management

Our active portfolio management encompasses both investments and divestments, and is driven by our partnership and divestment process, which aims to improve our operational efficiencies and return on capital and to generate value for our business. 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 contributing to the company's leverage target, divestments help improve 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:

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

From January 1, 2021 through February 23, 2022, we completed, among others, the following divestitures.

Signing date	Closing date	Main transactions	Transaction nominal value⁽¹⁾ (US\$ billion)
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
01/07/2021	04/09/2021	Sale of the entire stake held in Eólica Mangue Seco 1	0.008
01/07/2021	04/05/2021	Sale of the entire stake held in Eólica Mangue Seco 3 and Eólica Mangue Seco 4	0.017
04/30/2021	04/30/2021	Sale of the remaining stake (10%) held in Nova Transportadora do Sudeste S.A. ("NTS")	0.333
02/26/2021	05/31/2021	Sale of the entire stake held in Eólica Mangue Seco 2	0.007
06/30/2021	07/05/2021	Petrobras Distribuidora S.A. Secondary Public Offer (sale of 37.5% Petrobras' shares)	2.238
08/21/2020	07/14/2021	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
12/21/2018	08/31/2021	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	0.049
07/29/2021	11/05/2021	Sale of the entire stake held in five electricity generation companies: TEP Termoelétrica Potiguar S.A. ("TEP") and Companhia Energética Manauara ("CEM")	0.032
08/27/2021	11/10/2021	Sale of the entire stake held in Breitener Energética S.A. ("Breitener")	0.058
03/24/2021	11/30/2021	Sale of refining and associated logistics assets in Brazil of Landulpho Alves Refinery ("RLAM") in Bahia	1.650
05/03/2021	12/06/2021	Sale of the entire stake held in three thermal power stations Bahia 1, Muricy and Arembepe located in Camaçari – BA	0.018
02/24/2021	12/06/2021	Sale of the entire stake held in nine onshore fields, located in Bahia, jointly known as the Miranga Complex	0.220
12/23/2020	12/22/2021	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
8/27/2020	12/28/2021	Total assignment of rights in 27 mature onshore fields, located in Espírito Santo, jointly known as the Cricaré Complex	0.155
07/05/2021	02/04/2022	Sale of the entire stake held in seven onshore and shallow water fields located in the state of Alagoas, jointly called Polo Alagoas	0.300
TOTAL			5.369

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

From January 1, 2019 through February 23, 2022, 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 ⁽¹⁾ (US\$ billion)
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
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
01/29/2021	Sale of the entire stake in the Peroá and Cangoá shallow water fields and in the BM-ES-21 deepwater concession, jointly known as Peroá Complex	0.055
07/12/2021	Sale of the entire stake held in the Papa-Terra field, located in deepwaters of the Campos Basin	0.106
07/28/2021	Sale of the stake (51%) held in Petrobras Gas S.A. ("Gaspetro")	0.394
08/25/2021	Sale of refining and associated logistics assets of Isaac Sabbá Refinery ("REMAN") in Amazonas	0.190
11/11/2021	Sale of Shale Industrialization Unit (SIX) in Paraná	0.033
12/23/2021	Sale of the entire stake held in 11 onshore fields located in the Sergipe-Alagoas Basin, jointly known as the Carmópolis Cluster	1.100
01/31/2022	Sale of the entire stake held in 26 onshore and shallow waters fields and also the entire stake held in Clara Camarão located in the Potiguar Basin, jointly known as the Potiguar Cluster	1.385
02/23/2022	Sale of the entire stake held in four onshore fields located in the Espírito Santo Basin, jointly known as the Norte Capixaba Cluster	0.544
TOTAL		4.093

(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. In 2021, we signed three amendments for these agreements, changing the signing deadlines for divestment for some assets.

Refining agreement

With the execution of the refining agreement, among other related commitments, we are committed to divest approximately 50% of our refining capacity as of the date of the agreement,

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.

In August 2021, we finalized the sale of REMAN to Ream Participações S.A. In November 2021, we divested from SIX by selling our stake in the company to Forbes & Manhattan Resources Inc. and completed the sale of RLAM to Mubadala Capital group. The sale of SIX and REMAN are still subject to conditions precedent, such as CADE's approval or agreement with ANP.

On the other hand, we terminated the divestment process for REPAR, RNEST and REFAP in February, August and October 2021, respectively. We plan to restart the divestment process at a later date.

LUBNOR and REGAP divestments are still underway. Currently, the signing of purchase and sale agreements is the focus of these transactions.

We are negotiating new terms with CADE for the refineries that have not yet been sold, reaffirming our commitment to the divestment.

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.

The process of closing this agreement is in its advanced stages. In July 2020, we sold our remaining 10% stake in TAG. In April 2021, we announced the conclusion of the sale of our remaining 10% interest in NTS and in July 2021 we signed the sale of our 51% stake in Gaspetro. Additionally, we announced the beginning of the binding phase in connection with our 51% stake in TBG.

In our transportation systems, we work 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.

In 2021, we made progress on several fronts, including leasing a regasification terminal in the state of Bahia and signing a contract for the use of a natural gas processing plant in UPGN Guamaré.

Regarding the commitment to negotiate access to processing systems, we started the commercial operation with Potiguar E&P in Guamaré on January 1, 2022. We also advanced to negotiations with Shell, Petrogal, Equinor, Petroleoconavo, Origin and Repsol, and proposed an interim solution. In this context, in December 2021, we signed swap contracts with these companies. The swap contracts are short-term and put forth the anticipation of access to the necessary infrastructure. Under these

swap contracts, we process the gas produced, it is subsequently reacquired by the companies, allowing them to directly access the natural gas and market starting January 1, 2022.

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 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 ⁽¹⁾
Non-binding	Sale of the entire stake (20%) held in MP Golf of Mexico LLC. (MPPG) located in Texas, USA, owner of offshore oil fields in the Gulf of Mexico
	Full sale of equity interest (51%) in Transportadora Brasileira Gasoduto Bolívia-Brasil (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 the Albacora Leste field, located in deepwaters in the Campos Basin
	Sale of the entire stake (27.88%) held in Deten Química S.A. (Deten)
	Sale of refining and associated logistics assets in Brazil: Gabriel Passos Refinery (REGAP) in Minas Gerais and Lubricants and Oil Products of the Northeast (LUBNOR) in Ceará
	Sale of the entire stake held in Petrobras Colombia Combustibles (PECOCO)
Binding	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") and Brentech Energia S.A. ("Brentech")
	Sale of the entire stake held in one thermal power stations 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 Urucu
	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 February 23, 2022.

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 2021 below.

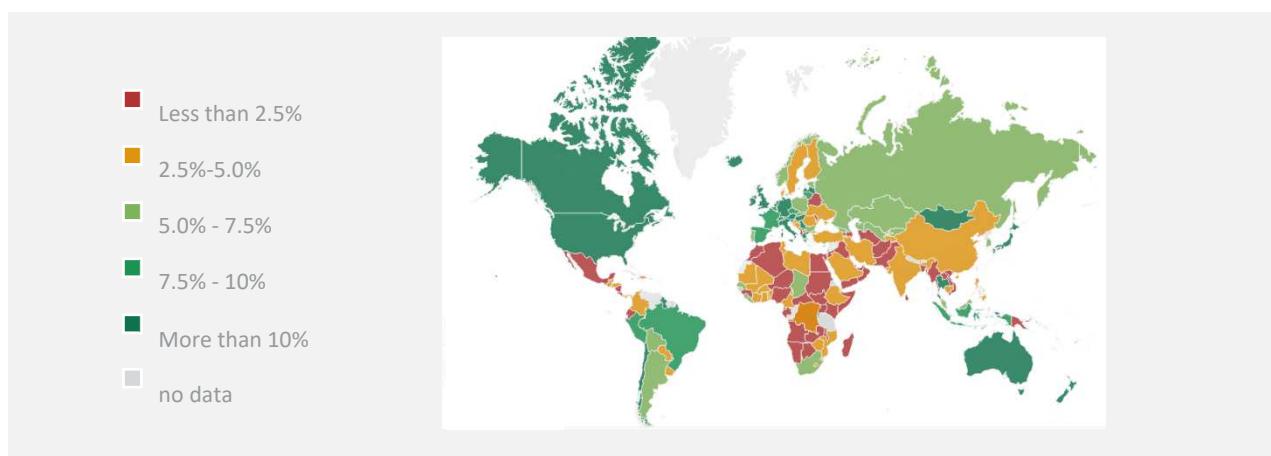
Global Economy

The performance of the global economy in 2021 was marked by the heterogeneous recovery of countries as a result of the Covid-19 pandemic and by the disruption of some crucial global supply chains. For example, within the semiconductor industry segment, production was lower than demand, causing an increase in prices and delays in several segments such as the auto industry. With regards to the Covid-19 pandemic, while the number of cases and deaths was significantly higher in 2021 when compared to 2020, restrictions on the circulation of goods and services were lifted. According to WHO data, in 2021, the number of recorded Covid-19 cases was 202.9 million people and 3.5 million deaths worldwide. Meanwhile, according to the database Our World in Data, 9.2 billion vaccinations were administered in this same timeframe.

Additionally, widespread fiscal and monetary stimulus plans carried out around the world also contributed to a faster recovery in demand in some key countries. The following graph and figure show the level of fiscal spending worldwide in response to Covid-19 and interest rates.

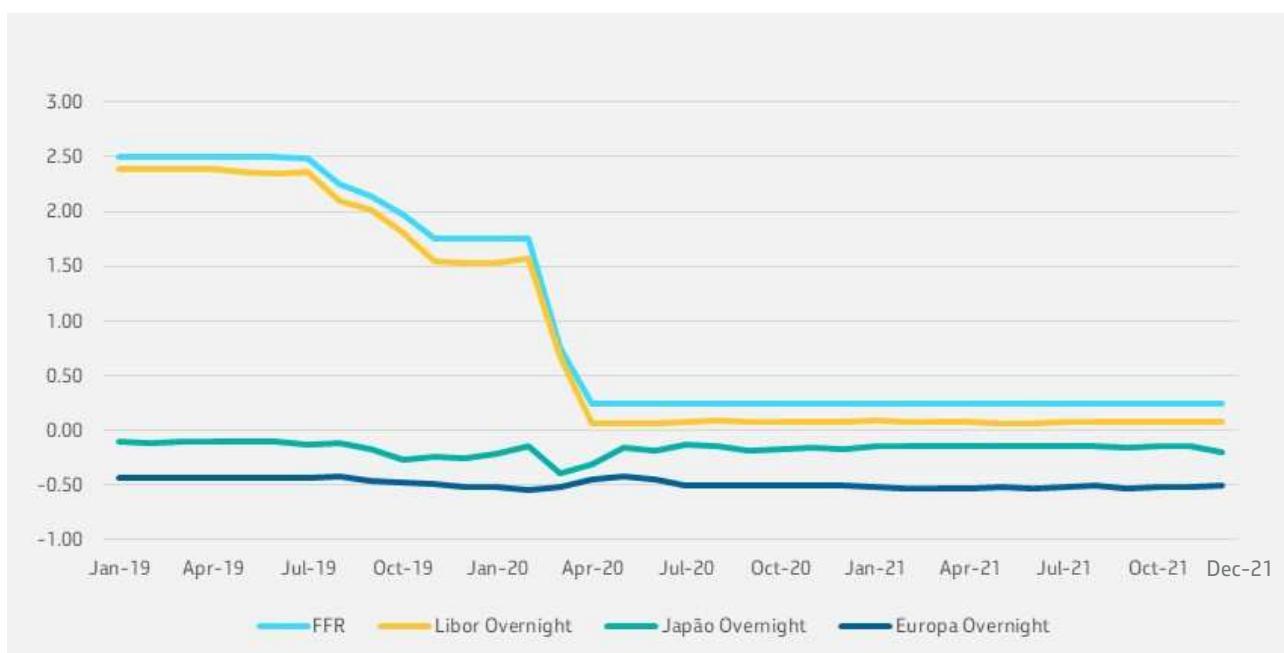
ADDITIONAL SPENDING AND FORGONE REVENUE IN RESPONSE TO THE COVID-19 PANDEMIC

(Percent of 2020 GDP)



Source: IMF

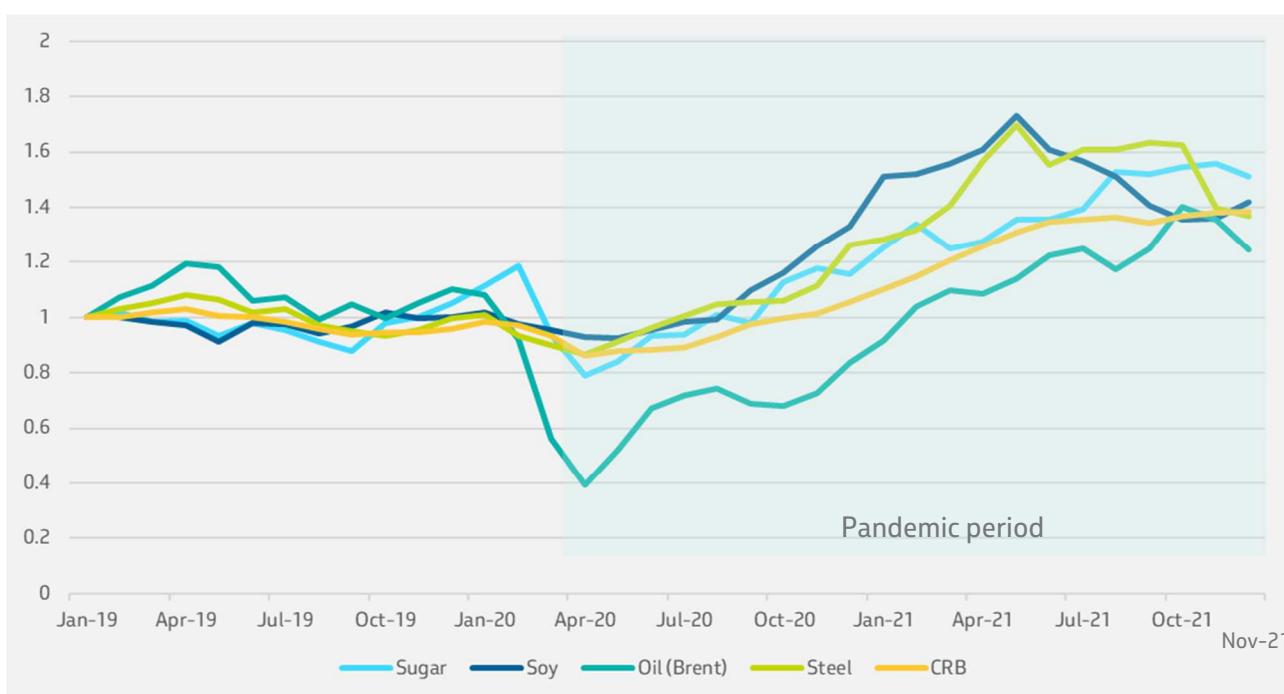
INTERNATIONAL INTEREST RATES, SELECTED COUNTRIES (%A.A.)



Source: FED, BCE, BBA and BoJ

These events and economic policies allowed for a faster recovery of the global economy in 2021 and started to increase inflation in several regions of the world, since the stimulus plans were enacted in a context of disruptions in the supply side. This change can be seen in the rise in commodity prices and in consumer prices in several countries. In the U.S., the 12-month accumulated inflation (CPI) recorded a peak of 7.1%, the highest number in the last 31 years. During the same period in Europe, that same indicator leaped to 5.0%. In developing countries, such as Brazil and Mexico, the pressure on commodity and consumer prices was similar.

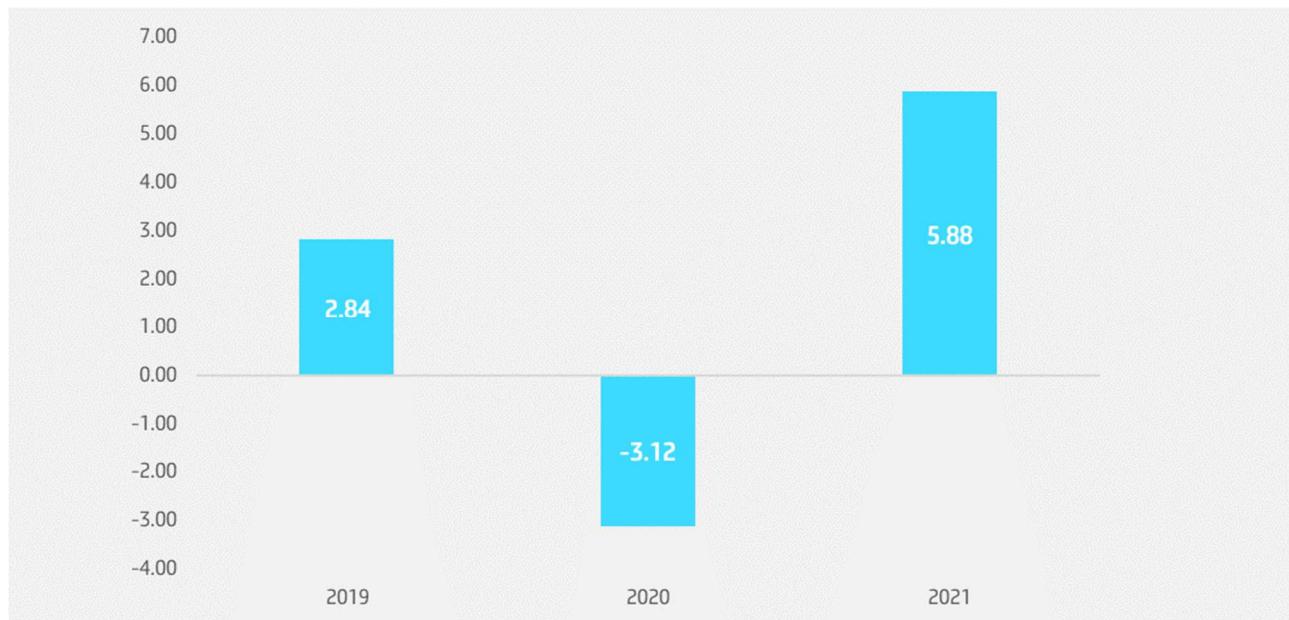
INTERNATIONAL COMMODITIES PRICES (INDEX, JAN2019=1)



Source: Bloomberg

In 2021, the global economy grew 5.9%, compared to a fall of 3.1% in 2020, according to the IMF. For 2022, the uncertainty lies in the pace of the tapering of monetary stimulus once there are signs of the price increases discussed above. According to the IMF, global activity level is expected to increase 4.4%.

GDP GLOBAL GROWTH RATE (%)



Source: IMF

On February 24, 2022, Russia started a military operation against Ukraine. The conflict impacts the international economic outlook, increasing global uncertainty and reinforcing trends and risks associated with the economic recovery from the Covid-19 pandemic. A series of economic sanctions on Russian citizens and enterprises have been imposed by the U.S., the United Kingdom and the European Union, such as: (i) freezing of assets; (ii) exclusion of banks and financial services companies from the international financial system, including the international payment system - SWIFT; and (iii) restrictions on companies' activities, such as GAZPROM by the U.S. and ROSTEC by the United Kingdom and the European Union.

Since the beginning of the military conflict, the Emerging Markets Bond Index (EMBI+) reported a 40% increase, Euronext retracted 10% and commodities prices have increased substantially, specifically, Brent oil (+57%), Japan Korea Marker (JKM) natural gas (+14%) and wheat (+45%).

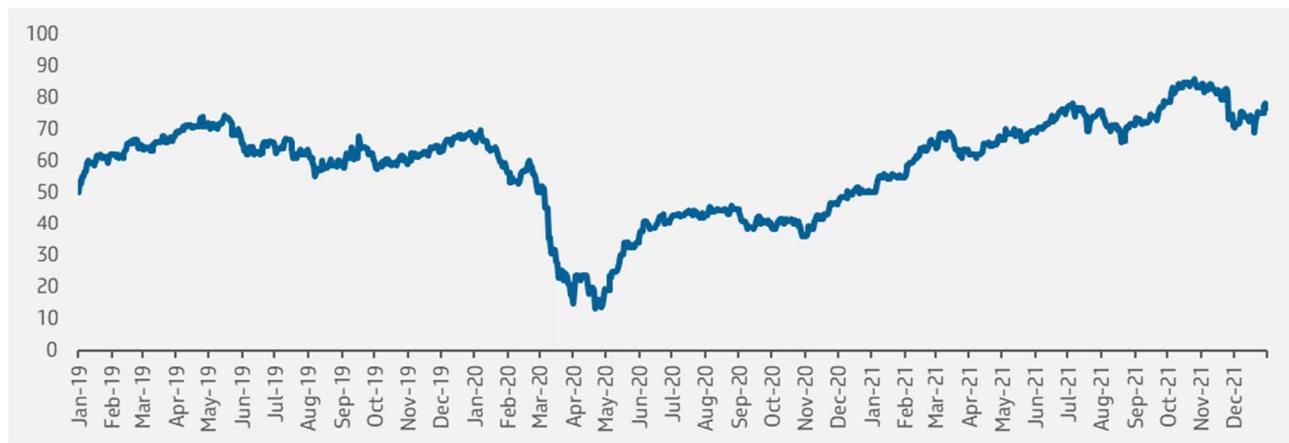
The surge trend in commodities prices takes place at a moment in which the main world economies are facing the return of inflation – for example, the inflation in the 12 months ended in January 2022 was 7.5% in the U.S. (highest since May 1982) and 5.1% in Europe (the highest since such data began to be recorded in January 1997).

Global Oil & Gas Market

The year 2021 began with a higher Brent price due to the signs of a tighter market as a consequence of the OPEC+ decision to suspend its planned production increases and the announcement by Saudi Arabia of an additional voluntary production cut of one million barrels per day for 1Q21.

On the demand side, the recovery in oil products consumption in the U.S. together with decreasing inventories led Brent price to reach its highest level in over one year. However, such gains in oil price lost momentum with new lockdowns in Europe and signs of decreases in demand in Asia by the end of the 1Q21. Nonetheless, the average Brent price for the period was 22% higher in comparison to the 1Q20 and close to pre Covid-19 levels.

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



Source: Bloomberg, 2021

Oil prices for 2Q21 started at lower levels in response to a higher number of Covid-19 infections in India and Europe. Separately, there were signs that negotiations between Iran, the U.S., and other countries to revive the nuclear deal, which would remove sanctions on Iranian production, were advancing.

However, in the second half of April 2021, Brent price started to increase again. The IEA, OPEC and EIA-DOE forecast a tighter oil market in the 2H21, despite the OPEC+'s decision to gradually increase its production between May and July 2021.

Price recovery gained momentum in June, supported by the recovery of Indian demand, along with strong compliance with the OPEC+ and the lower probability that Iran would reach an agreement with the U.S. in the short term. By the end of the month, Brent price had reached US\$76/bbl.

3Q21 began with oil prices down in response to the new lockdowns in China and other Asian countries due to the increasing number of Covid-19 cases by the Delta variant. At the same time, the OPEC+ decided to increase its production by 400 mbbl/d per month starting in September 2021.

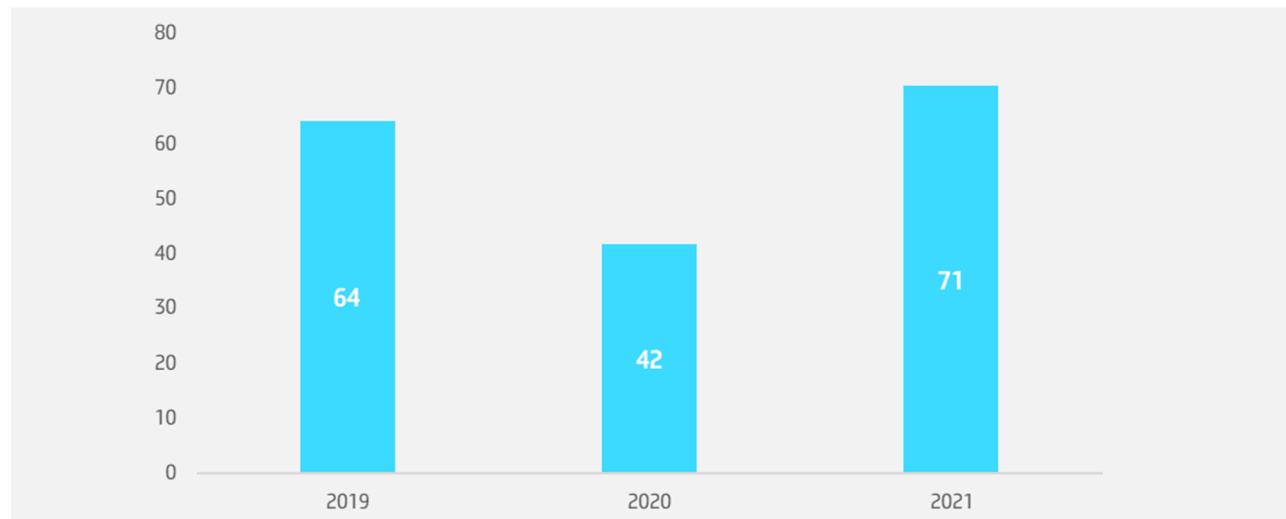
By the end of September 2021, high natural gas prices increased the expectation of growth in crude oil demand due to the gas-to-oil switch. Brent price surpassed the US\$79/bbl level for the first time since October 2018. Meanwhile, on the supply side, damage caused by hurricane Ida in the Gulf of Mexico resulted in the loss of more than 30 mmbbl by the end of 3Q21. As a result, 3Q21 was the sixth consecutive quarter with an increase in Brent price.

At the beginning of November 2021, OPEC+ decided to maintain its policy of gradually restoring production, announcing the return of 400 mbbl/d to the market in December 2021, despite the requests of big oil consumers for a quicker supply ramp-up. In response, several countries decided to release oil from their emergency reserves to reduce fossil fuel prices, but Brent oil price remained around the US\$80/bbl level until mid-November 2021. However, by the end of the month, the discovery of a new Covid-19 variant,

Omicron, in Africa, led to a steep fall in the Brent price, which reached US\$73.3/bbl on November 26, 2021, a drop of 10.9%.

The oil market rallied in the following weeks as market changes were supported by easing concerns over the Omicron variant's impact on global economic growth and transport fuel demand. The Brent price weekly average rose during the month of December, closing at US\$77.02/bbl on December 31, 2021.

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



Source: Bloomberg, 2021

The conflict between Russia and Ukraine is impacting the oil and gas market. According to the International Energy Agency ("IEA"), Russian oil and oil products exports reached 7.8 MMBpd in November 2021 - 64% of this volume is represented by crude oil. Hence, a total of 5 MMBpd is at risk of being subject to sanctions. Replacing such large volumes of supply in the short-term could pose difficulties. For instance, OPEC's spare capacity in January was around 3 MMBpd.

The uncertainty in relation to the developments of the conflict in Ukraine has contributed to a 57% increase of the Brent price from January 1 until March 21, 2022.

In 2021, international natural gas prices showed widespread increases, with historic highs in the Asian (JKM) and European (NBP/TTF) benchmarks, as well as strong increases in the North American market, as a result of the combination of several supply shocks and rising demand.

The increase in natural gas prices occurs due to two distinct dynamics. Prices in the major import markets, such as Europe and East Asia, are strongly influenced by the LNG spot trade. In contrast, prices in the U.S. and the export market, are still largely dictated by domestic dynamics.

On the supply side, global liquefaction capacity, which was impacted in 2020 by significant downtime due to unplanned maintenance, proved to be fairly incapable of accommodating high prices. New shortages at different exporters put the supply available in 2021 at levels similar to those of the previous year despite a resistant price environment. The rise in prices and demand, therefore, takes place in a context of limited supply availability LNG cargoes.

In Asia, the expansion of demand was due to the economic recovery of the region over the course of the Covid-19 pandemic in conjunction with disruptions in the coal supply chain, low reservoir levels in Chinese hydropower plants, lower output by nuclear power plants in South Korea and efforts to replenish natural gas stocks for the coming winter that left little stock during the winter of 2020-2021.

In Europe, the rise in prices stemmed from the diversion of LNG cargoes from the European market to the Asian market. In December 2021, prices reached levels higher than JKM, a rare situation. A lot of factors led

to this growing LNG need: climate accounted to a higher demand for both heating and for air conditioning; lower wind power generation that needed to be replaced by gas, the UK being the one who suffered the most; high carbon prices increased the price of coal for power generation; an overall decline in European natural gas production; and lower supply from Russia.

There were reports that Russia was withholding supplies for geopolitical reasons and pushing for new long-term deals with Europe. Russia denied these allegations, merely declaring that it was fulfilling its contractual obligations on gas deliveries. By the end of 2021, tensions increased with the movement of Russian troops on the border with Ukraine. On February 24, 2022, Russia invaded Ukraine. The rise in prices in the European market has interrupted a period of years with persistent low-price levels.

In the U.S., cost-cutting actions by gas producers to protect cash generation amid the effects of the Covid-19 pandemic in 2020 led to capital discipline and focus on reducing debt. This was a major factor that explains the rise in prices in the U.S., resulting from a supply that is not very reactive to a global market with high demand for LNG exports.

The current conflict between Russia and Ukraine, has brought concerns and high volatility to the natural gas market. Russia is the fourth largest global exporter of LNG, after Qatar, Australia, and the U.S., in addition to being a relevant supplier of natural gas to Europe through gas pipelines. In 2021, Russian exports amounted to 45% of the European Union imports and about 40% of the total consumption. The most drastic development would be a reduction in the Russian supply through pipelines to Europe, together with restrictions on the Yamal LNG placement in Europe.

From the beginning of the year until March 21, 2022, JKM gas prices recorded an increase of 14%.

Brazilian Economy

The Brazilian economy grew by 4.6% in 2021, according to the Brazilian Institute for Geography and Statistics ("IBGE"). This growth rate is the highest since 2010, however, this is mainly due to the high statistical effect, so-called "carry-over", which was of 3.7% in 2021, meaning that if the economy had zero growth since the last quarter of 2020, the annual growth rate for 2021 would be 3.7%.

Due to the worsening of the Covid-19 pandemic at the beginning of 2021, a new assistance program for the most vulnerable segments of the population was introduced. However, the scope was more limited, with smaller transferred values in comparison to the aid distributed in 2020. The more expansive recovery of the services sector is mainly associated with the lifting of restrictive measures on mobility and was mainly driven by the middle and upper classes through the disbursement of a large part of savings accumulated throughout 2020 from reduced service-related expenses.

The growth of the service sector was not accompanied by the expansion of industrial production. In 2020, the industry, the non-durable consumer goods segment in particular, was one of the main beneficiaries of emergency aid. In this category, the food sector (which represents the largest relative share in the Brazilian industry), whose expansion was 4%, was the main driver. In 2021, this same segment showed a drop close to 7.5%. The sharp drop in food production can be explained not only by the reduction in the aid transferred by the government, but also by growing inflation in Brazil. An important part of the rise in domestic prices are external factors arising from disruptions and imbalances in the global supply chain. For example, the prices of agricultural and mineral commodities (including oil and natural gas prices) also rose significantly, putting pressure on prices in several supply chains that use these commodities as input.

In terms of internal factors, the water crisis played a crucial role, as more than 65% of electricity comes from hydropower sources. With the lack of rain and the sharp drop in the level of the reservoirs, a crucial component of the hydroelectric plants was unable to operate, requiring the use of other sources of electrical energy. The main source that replaced hydropower was natural gas, which was used to generate power in thermoelectric plants. As gas prices rose sharply in 2021, the cost of power generation also increased.

In addition, the maintenance of the exchange rate at highly devalued levels during most of the year (above R\$/US\$5.20) also contributed to inflation, with inflation exceeding 10% in accumulated terms at the end of 2021. In annual terms, the Brazilian currency has lost almost 40% of its value related to the U.S. dollar since 2019.

This rise in inflation required the Central Bank to take stricter measures, raising the basic interest rate (SELIC), which after reaching a historic low of 2% in August 2020, rose to 9.25% in December 2021, reaching 11.75% in March 2022. This macroeconomic context of rising inflation and interest rates poses some challenges for both GDP and employment recovery. Concerning the GDP, the Focus Bulletin, published by the Brazilian Central Bank, forecasts a growth of 0.5% for 2022.

Brazilian Oil and Gas Market

Demand for oil products in Brazil reached its all-time record in 2014. Since then, the average annual GDP growth has remained negative, explaining most of the drop in demand for oil products in the same period.

The Covid-19 pandemic has had extensive effects on oil products demand, starting in the 2Q20. 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.

During subsequent quarters, restriction measures were lifted gradually amid the decrease in the daily number of Covid-19 related cases and deaths. In 2021, the bulk of oil products demand has already surpassed the levels seen before the pandemic with jet fuel and naphtha being the only products whose demand is still below pre-pandemic levels.

CONSUMPTION OF SELECTED FUELS IN BRAZIL (MBBL/D)¹



Source: Petrobras and EPE, 2021

Despite the recovery, the cumulative effect of the water crisis, the rise in commodity prices and the disorganization of supply chains caused by the Covid-19 pandemic are still having repercussions on fuel markets. Ethanol supply has retracted, causing the rise of ethanol prices and the loss of its competitiveness

¹ Includes energy sector demand.

against gasoline. To mitigate the effects of higher biodiesel prices, the Brazilian government has temporarily reduced the diesel/biodiesel blend requirements, which has led to an increase in the demand for fossil diesel. In response to the severe water crisis experienced in the southern and central part of Brazil, the fuel oil demand for power plants skyrocketed. As a result, overall demand for fuel oil rose by roughly 50% in 2021 when compared to 2020.

Diesel sales rose 7.5% in 2021. Temporary basic income policies to mitigate the effects of the Covid-19 pandemic stimulated the demand for necessary goods such as food and beverages. Additionally, record grain harvests boosted 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. In 2021, jet fuel demand gradually recovered to pre pandemic levels, rising by roughly 25% in comparison to 2020, but still remains 40% below 2019 levels.

Despite this extraordinary and impactful event, the long-term trends that are forming in the Brazilian market for oil products are expected to keep their course. 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 flex fuel and, in the future, the latter will be gradually replaced by electric automobiles. Moreover, the development of diesel demand is expected to be slowed by the mandatory increase of the biodiesel percentage in the fuel blend that is delivered to the final consumer.

Fuel oil is consumed in three main segments: industrial, power generation and as a marine fuel. 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 maritime transport segment, a strong demand for decarbonization is starting to emerge, which will certainly have negative repercussions on the demand for bunker in the medium and long term.

According to the Ministry of Mines and Energy, in 2021, natural gas demand inter-annual data increased by 30% to 94 million m³/d, from an average of 72 million m³/d in 2020 (not considering the gas used in pipeline transport). This growth reflects post-Covid-19 economic recovery and the worst hydro crisis the country has ever experienced. In the same period, the consumption of gas for power generation grew by 64%. Because the 2020 market was affected by the Covid-19 pandemic, it is also relevant to examine 2021 growth compared to 2019. Natural gas demand increased by 20% from 78 million m³/d in 2019 and demand for power generation increased by 48%.

Technology and alternative sources

The Brazilian energy mix (i.e., different types of primary energy sources) is going through change, especially in terms of power generation. This change is influenced by the development of renewable sources, such as wind (1.7%) and solar photovoltaic power (0.3%) 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

In 2021, the new natural gas regulatory framework was finalized via presidential approval of Law 14,134, of April 8, 2021, and the corresponding regulatory decree (Decree No. 10,712, of June 2, 2021).

This new regulatory framework results from an intense debate, started in 2016 and led by the executive authority, which aimed at identifying legal and regulatory constraints for the promotion of a competitive, liquid, and efficient market, considering the reduction of our market share.

The new regulatory framework approval provides vital legal support for the administrative measures that had already been implemented while also enabling modifications in Law 11,909/2009 (previously known as the New Gas Law) in relation to issues that were incompatible with the creation of a new natural gas market.

For the effective implementation of this legal milestone, the ANP must establish a new regulation for the operation of this market while individual states must establish local regulations recognizing dealers and free consumers, including their right to contract at a national level.

According to the updated Regulatory Agenda ANP 2021-2022, published in September 2021, the regulation process will take place in 2022 and 2023. In any case, the Decree No. 10,172/2021 allows ANP to adopt individual solutions, though it must follow current judicial decisions until the regulation process is completed by the regulatory entity.

In April 2021, the Natural Gas Regulatory Good Practices Guidance Manual was published by the Natural Gas Opening Market Monitoring Committee (CMGN, in Portuguese), which sets forth general guidelines about the sector regulation, aiming at supporting state regulators and promoting the standardization in the distribution sector.

Another new development for the sector was the promulgation in July 2021 of Law 14,182 in connection to the Eletrobras privatization. In addition to determining the company capitalization, the law included an indication for contracting 8GW from natural gas power plants from 2026 until 2030, among other measures.

Concerning the refining segment, in June 2019, we signed a commitment with CADE that consolidates the understanding between the parties on the execution of divestment of refining assets in Brazil. Among other conditions, the agreement considers the divestment of approximately 50% of our refining capacity and we are taking further action to fulfill such commitments. Divestments are ongoing and in 2021, we successfully reached agreements for the sale of Landulpho Alves Refinery ("RLAM"), Isaac Sabbá Refinery ("REMAN") and Shale Industrialization Unit ("SIX").

For more information on our divestment process, see "– Portfolio Management".

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

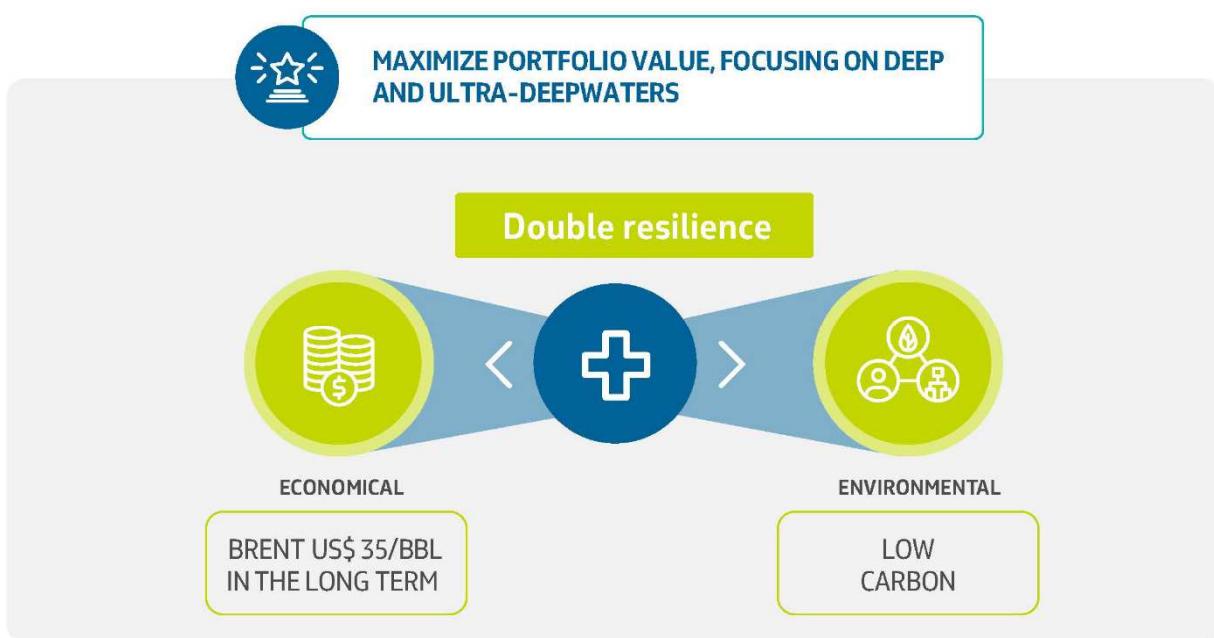
For more information on our agreement with CADE regarding our divestments in refining assets, see "Risks – Risk Factors – Operational Risks" and "– Portfolio Management" in this annual report.

Strategic Plan



2022-2026 Strategic Plan

Our Strategic Plan maintains a consistent strategy of focusing on projects with full potential to generate value, resources and contributions to Brazilian society. We prioritize monetizing resources into wealth for Brazil while following the sustainability guidelines for energy transition. We have expanded 24% our investment plans for the next five years, an endeavor that we are pursuing with high responsibility and diligence with regards to the allocation of resources.



We continue to strengthen our initiatives related to ESG matters, with a firm commitment to accelerate decarbonization in our operations and prioritize acting ethically and transparently, with a particular focus on safe operations and respect for people and the environment. The strategic model we have adopted remains anchored in the assumption that producing oil and gas can be compatible with accelerated general decarbonization efforts, by adopting the concept of double resilience. Double resilience is composed of two parts: (1) economic, which means resiliency towards low oil price scenarios, and (2) environmental, characterized by a focus on a low carbon footprint. Currently, we have reached a prominent position in the production of low carbon emission oil, particularly with respect to our pre-salt fields, which makes us a relevant player in the offshore oil and gas industry in relation to this requirement. We will keep pushing for further reductions, investing in new technology and CO₂ injection.

The Strategic Plan maintains active portfolio management, with expected divestments ranging from US\$15 to US\$25 billion, which we believe will contribute to further business efficiency improvements, value creation, higher return on capital and strong cash flow to maintain an adequate level of debt. This active portfolio management allows us to explore better investments opportunities by focusing our activities on assets that have more potential to raise our portfolio's expected rate of return in a sustainable way.

Our Strategic Plan presents four key metrics that quantify the attributes of our vision and provide more explicit guidance on our main short-term goals.

2022 TARGETS



AMBITION: ZERO FATALITIES AND ZERO LEAKAGE

¹ GHG: Index of compliance with greenhouse gas targets.

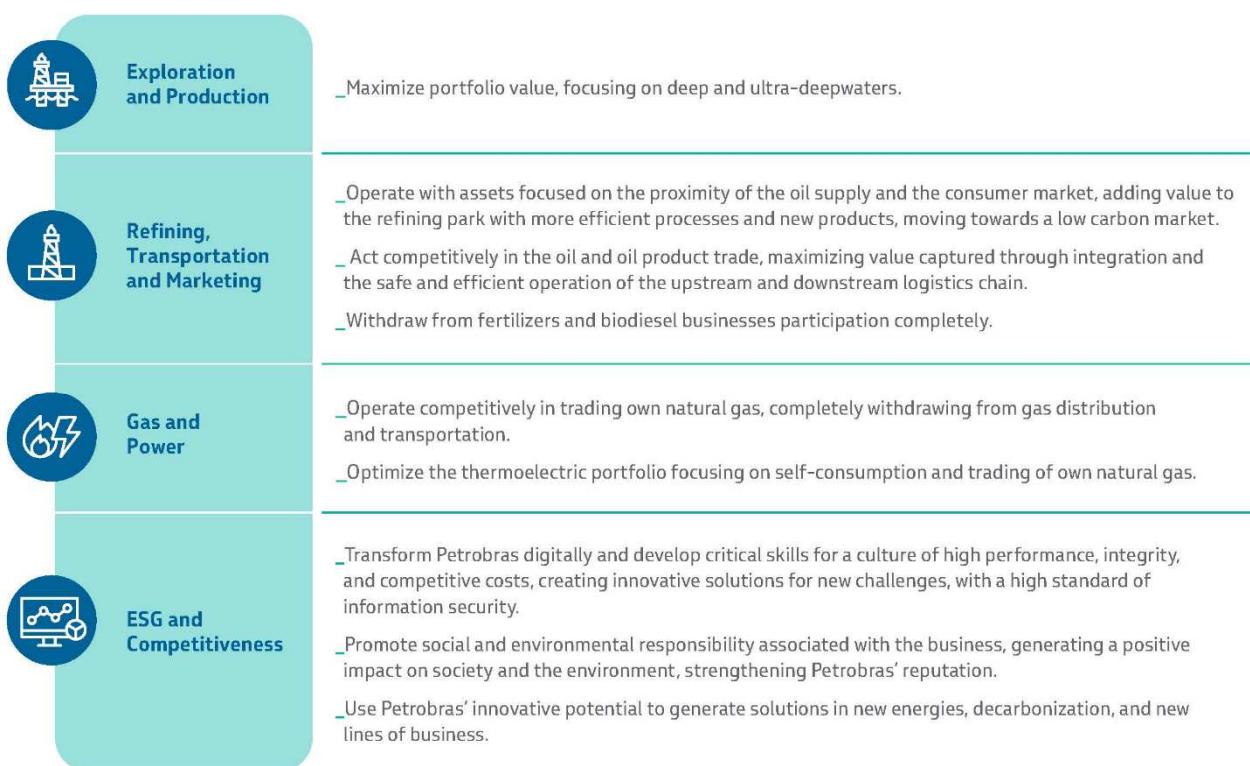
² Delta EVA®: Economic Value Added. If gross debt exceed US\$ 65 billion, the metric score will be counted as zero.

³ Total Recordable Injuries per million man-hours.

In order to incentivize the achievement of our goals, three of these metrics will have a direct impact on the remuneration of our executives and employees in 2022. The TRI indicator (total recordable injuries per million man-hours) is one of the top metrics, but it is not used for employee variable compensation purposes. We consider life as a non-negotiable value for us and, therefore, one of our most important goals is to reach zero fatalities. For 2022, the alert limit remains below 0.7, which reaffirms our commitment to life and places us in the top industry quartile.

A gross debt metric of US\$60 billion was excluded from our Strategic Plan objectives due to our achievement of this metric in the third quarter of 2021. However, to keep the incentives for proper leverage management, the maintenance of gross debt below US\$65 billion will be considered as a trigger for the target, Delta EVA®. If this value is surpassed, our Delta EVA® score will be zero.

The Strategic Plan encompasses a set of strategies that incorporate and give visibility to events and issues that are relevant to our future, such as: (i) transparency and focus on sustainability (ESG), particularly in relation to decarbonizing operations; (ii) maximizing portfolio value, with a focus on deepwater and ultra-deepwater assets; (iii) adding value to our refineries, with more efficient processes and new products; and (iv) strengthening the integration of commercialization and logistics activities with all operations to reduce costs, achieve our desired markets and increase their economic value to our company.



Our projected Capital Expenditure (CAPEX) for the 2022–2026 period is US\$68 billion, a 24% increase over the 2021–2025 Strategic Plan, of which 84% or US\$57 billion will be allocated to the Exploration and Production segment. This CAPEX amount is consistent with our strategic guidelines, which focuses our investments on deep and ultra-deepwater assets and projects to maximize portfolio value.

For 2022, we have already committed 79% of our total CAPEX amount. On the other hand, in the last year of this Strategic Plan (2026) only 24% of the total projected CAPEX amount is already committed, which indicates a greater level of investment flexibility due to the lower proportion of commitments assumed, according to our 2022–2026 Strategic Plan. It is worth noting that, throughout the life cycle of such projects, the maturity level will increase and a greater proportion of the CAPEX will be utilized.

INCREASE OF CAPEX WITH DEBT UNDER CONTROL

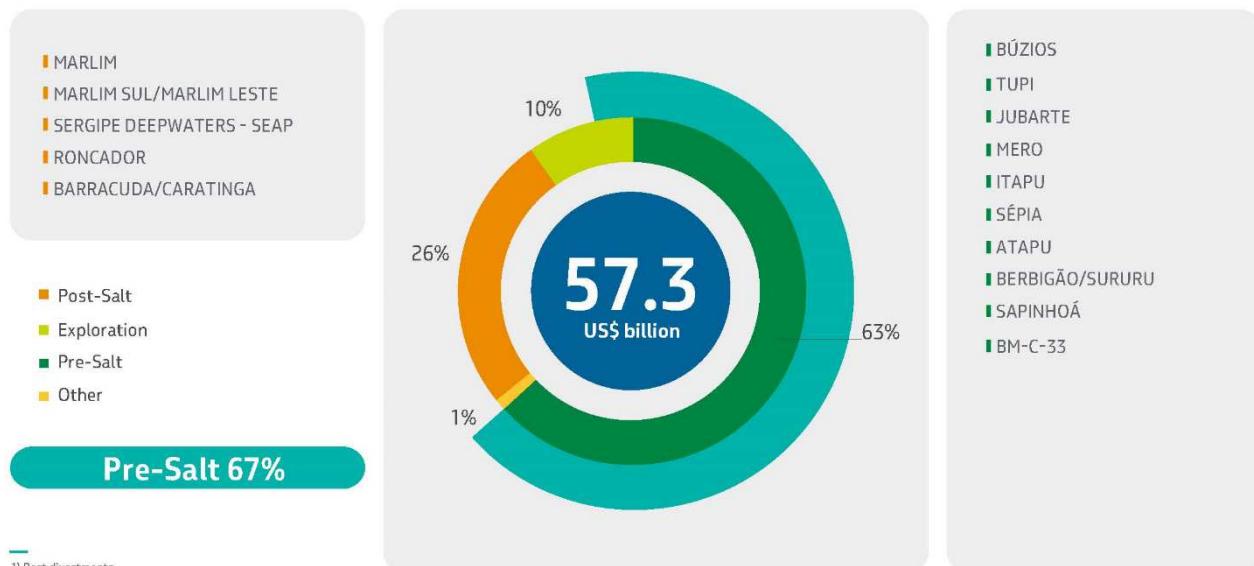


¹ 1 ~ 60% of CAPEX in dollars.

The amount of CAPEX was adjusted from US\$55 billion in our 2021-2025 Strategic Plan to US\$68 billion in our current Strategic Plan. The majority of our expenses (60% of our CAPEX) is planned in U.S. Dollars, while the remaining part will be in Brazilian *Reais*.

The main drivers for this CAPEX increase are the procurement strategy of the Búzios platforms; new projects prioritization; *Marlim* divestment revision (i.e. keeping Marlim in our portfolio); and impacts of the Covid-19 pandemic, among others. In contrast, there were also factors that reduced our investments, which include (i) CNOOC's acquisition of an additional share of 5% in the Production Sharing Contract of the *Búzios* Surplus Transfer of Rights and (ii) the depreciation of the Brazilian real against the U.S. Dollar.

E&P CAPEX¹ 2022–2026



The increased investment in E&P in our portfolio is aligned with our strategic focus: increasingly concentrating funds in deep and ultra-deepwaters assets, where we have been increasing our competitive advantage over the years, resulting in the production of a better-quality oil with lower greenhouse gas emissions. We continue to focus on deepwater offshore assets, especially in the pre-salt, because that is where we are able to extract the greatest possible value. Our pre-salt discoveries are among the most important in the industry in recent decades. Such pre-salt assets comprise large accumulations of excellent quality, low sulphur high commercial value light oil. It is in this area that we are internationally recognized for our presence, technical capacity and developed technology. In order to retain this focus, we are substantially reducing the number of our assets, through the divestment of onshore and shallow water production fields. The reduction in non-core assets represents roughly 90% of our number of production fields and is part of the strategy to focus on high productivity fields, as is the case for our large fields of pre-salt.

Thus, in our Strategic Plan, we are investing 67% of our total CAPEX amount in E&P, concentrating specifically on pre-salt assets and projects, particularly the *Búzios* field, ultimately allocating approximately US\$23 billion out of US\$57 billion towards this segment.

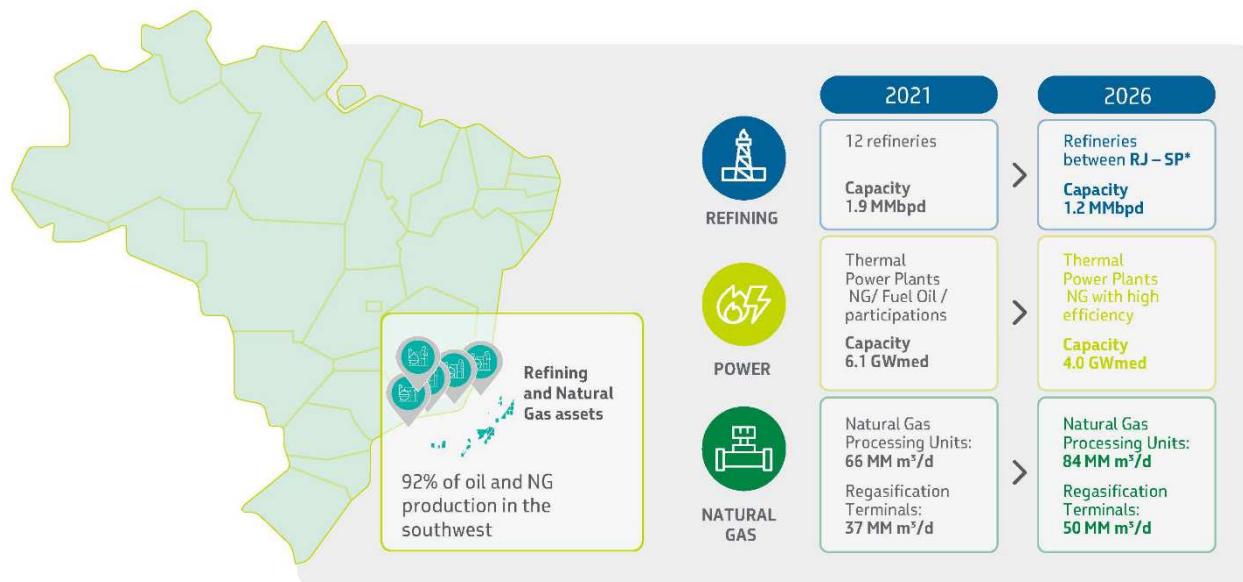
In the 2022–2026 period, the Campos Basin remains an important area for investments, and we plan to allocate US\$16 billion of the total investment planned for the E&P segment. We will invest in more than 100 new wells and three new FPSOs. These projects have a potential to increase the oil and natural production from 0.7 mmboed in 2021 to 0.9 mmboed in 2026. Without investment in projects in the Campos Basin, the production expected for this area would decrease to 0.3 mmboed in 2026. In other words, by making a

significant investment in this area, we plan to produce 0.6 million more barrels of oil equivalent per day in 2026.

Besides the Campos Basin, the plan contemplates relevant investments in other Brazilian basins outside the Southeast, in deep and ultra-deepwaters. We will invest US\$2 billion in the Equatorial Margin, where there is a potential frontier for exploration, and will continue to invest in the Sergipe deep-water development project (>2,400 m), with the allocation of the first FPSO unit in 2026 with a capacity of 120 mbbl/d.

Our planned CAPEX also includes the amount of US\$1.8 billion in projects related to decarbonization initiatives for our operations, with an emphasis on CO₂ separation, methane detection systems, commissioning of closed flares, HISEP™ technology and projects to reduce carbon in refineries, among others. Most of these initiatives are associated with production optimization and/or operational efficiency, resulting in important effects on emissions reduction.

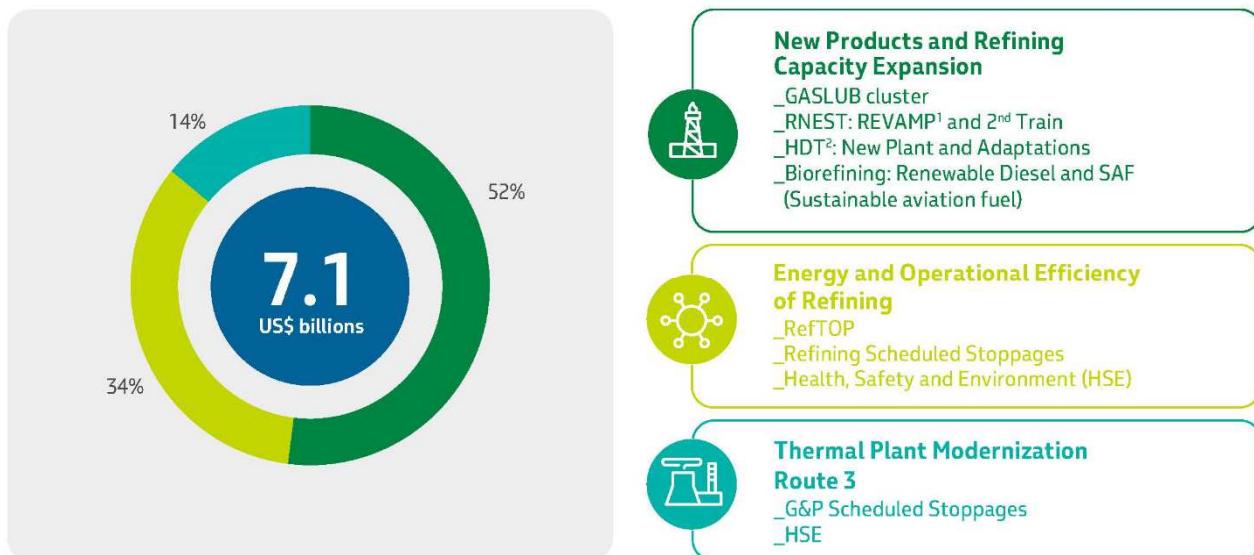
ACTIVE PORTFOLIO MANAGEMENT ASSETS CLOSE TO THE SUPPLY OF OIL AND GAS AND THE CONSUMER MARKET



In the Refining segment, our strategy is focused on assets near the largest oil supply and the largest Brazilian consumer market, taking advantage of greater synergy and integration with our E&P assets. Consistent with our portfolio management strategy, we are maintaining our divestment plan, with respect to our current refining units and, in contrast, increase our investment in upgrades to our remaining refineries in order to increase S-10 diesel production, biorefining capabilities and operational efficiency while still lowering emissions.

We have 12 refineries located in different regions across Brazil and a shale processing unit in Paraná. Our strategic goal is to keep only five refineries in the Southeast. For the next five years, the estimated CAPEX is US\$7.1 billion, of which US\$6.1 billion will be invested in the Refining segment and US\$1 billion will be allocated to the G&E segment. Investments will be concentrated in the projects highlighted below.

REFINING, GAS AND POWER CAPEX 2022-2026



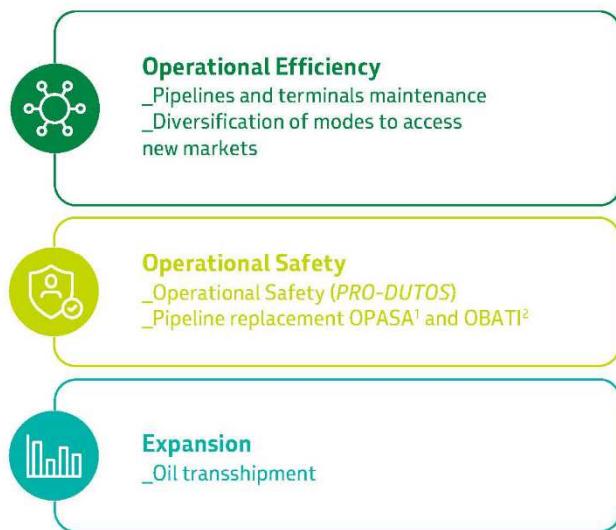
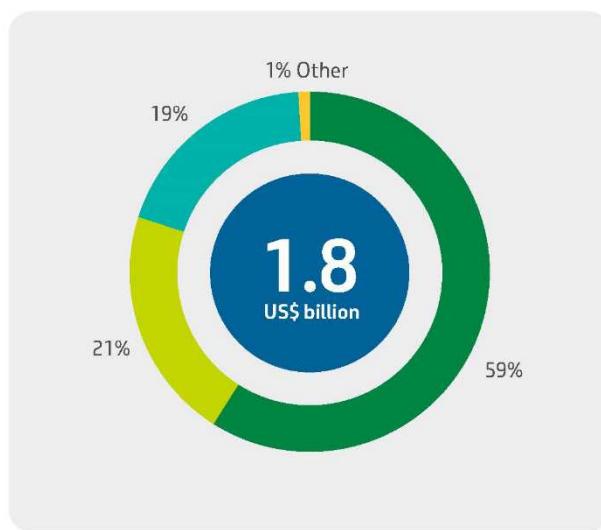
1) REVAMP = to overhaul the 1st Train of RNEST, including to build the SNOX unit (Sulfur emissions abatement unit).
2) HDT = Hydrotreatment Unit.

The Refining RefTOP program is a noteworthy investment of US\$0.3 billion, which aims to place our refineries among the best in the world in terms of energy efficiency and operational performance in natural gas, steam and electricity use. Ultimately, this would result in an optimization of greenhouse gas emissions.

Our Strategic Plan provides for an investment of US\$2.6 billion for the expansion of our refining capacity for the completion of RNEST's Train 1 and the construction of Train 2. By 2026, the total diesel production will be oriented towards S-10 grade. To achieve this goal, we plan to invest in a new hydrotreatment unit at REPLAN, as well as in adaptations at REDUC and REVAP. Additionally, we are planning on investing in the operational integration of REDUC and GASLUB, which will increase S-10 diesel and QAV production, as well as create a new basic oil unit for Group II lubricants.

In the Gas and Power segment, our investments are focused on Route 3 and natural gas processing unit to enable a 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 in 2022.

TRADING AND LOGISTICS CAPEX 2022-2026



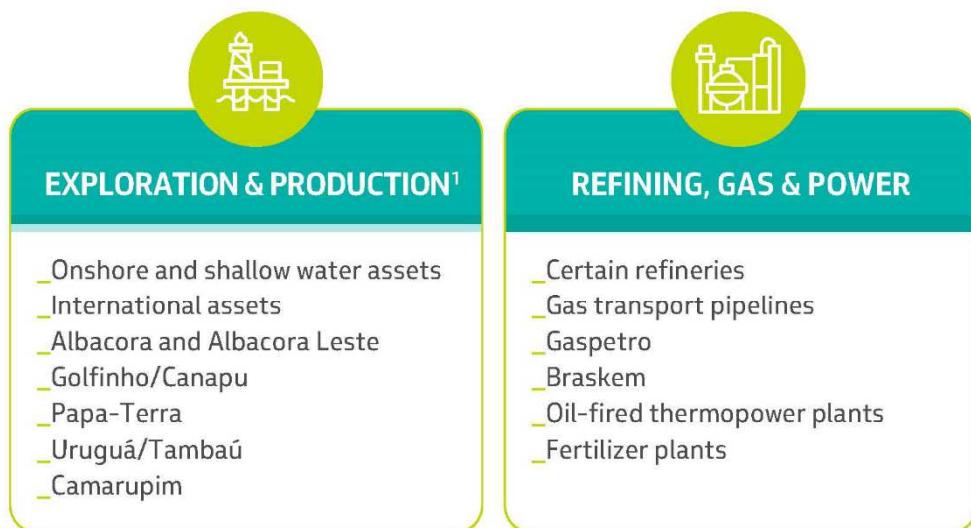
1) OPASA = Oil pipeline between Replan refinery (Paulínia/SP) and Barueri/SP Terminal
2) OBATI = Oil pipeline between Barueri (SP) Terminal and São Caetano do Sul/SP Terminal

Trading and Logistics ("T&L") investments are focused on improving operational efficiency (59%), operational safety (21%), expansion (19%) and others (1%). We are investing US\$1.8 billion in pipeline and terminal maintenance, diversification methods to access new markets, pipeline replacements and oil transshipments.

The divestments forecast in our Strategic Plan are between US\$15-25 billion, with the highest concentration expected in 2023. We have maintained our divestment plans for assets and companies that we previously announced in our 2021-2025 Strategic Plan, except for *Marlim*, which is once again a part of our Strategic Plan. The potential sale of such assets may depend on market and strategic conditions.

Our principal planned divestitures during the 2022-2026 period are presented below.

PORTRFOIO MANAGEMENT FOR BETTER CAPITAL ALLOCATION
MAIN ASSETS



US\$ 15-25 BILLION BETWEEN 2022 AND 2026²

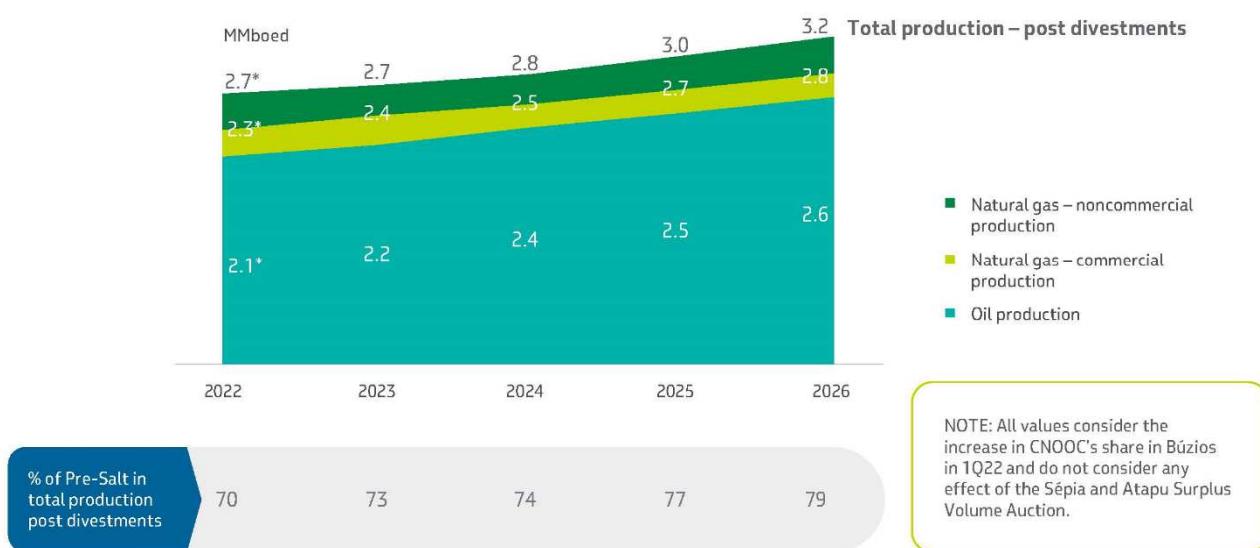
1) Impact of approx. 50 kboed in 2022 production, average impact of c. 250 kboed in the remaining years of the plan.
2) Includes the estimated amount to be received by Petrobras in cash for the 5% of Búzios stake sold to CNOOC in 2022.

Production of Oil, NGL and Natural Gas

The oil and gas outlook for the 2022–2026 period indicates continued growth, even with divestments. In line with our strategic focus, E&P activities are concentrated in deep and ultra-deepwaters in Brazil, representing 92% of total production in 2022, with potential to reach 100% in 2026. Production from the pre-salt will represent 79% of our total production by the end of the five-year period. The production curve considers the start up of 15 new platforms in the period of 2022–2026, nine chartered and six owned.

The production curve estimated in our Strategic Plan, published in November 2021, is shown in the following chart:

FOCUS ON VALUE MAXIMIZATION, WITH GREATER CONCENTRATION ON THE PRE-SALT



* With variation of +/- 4%. Reduction of 0.1 MMboed in relation to 2022 forecasts in the previous plan due to Covid-19 effects and increased participation of CNOOC in Búzios.

Revision of the 2022 production outlook

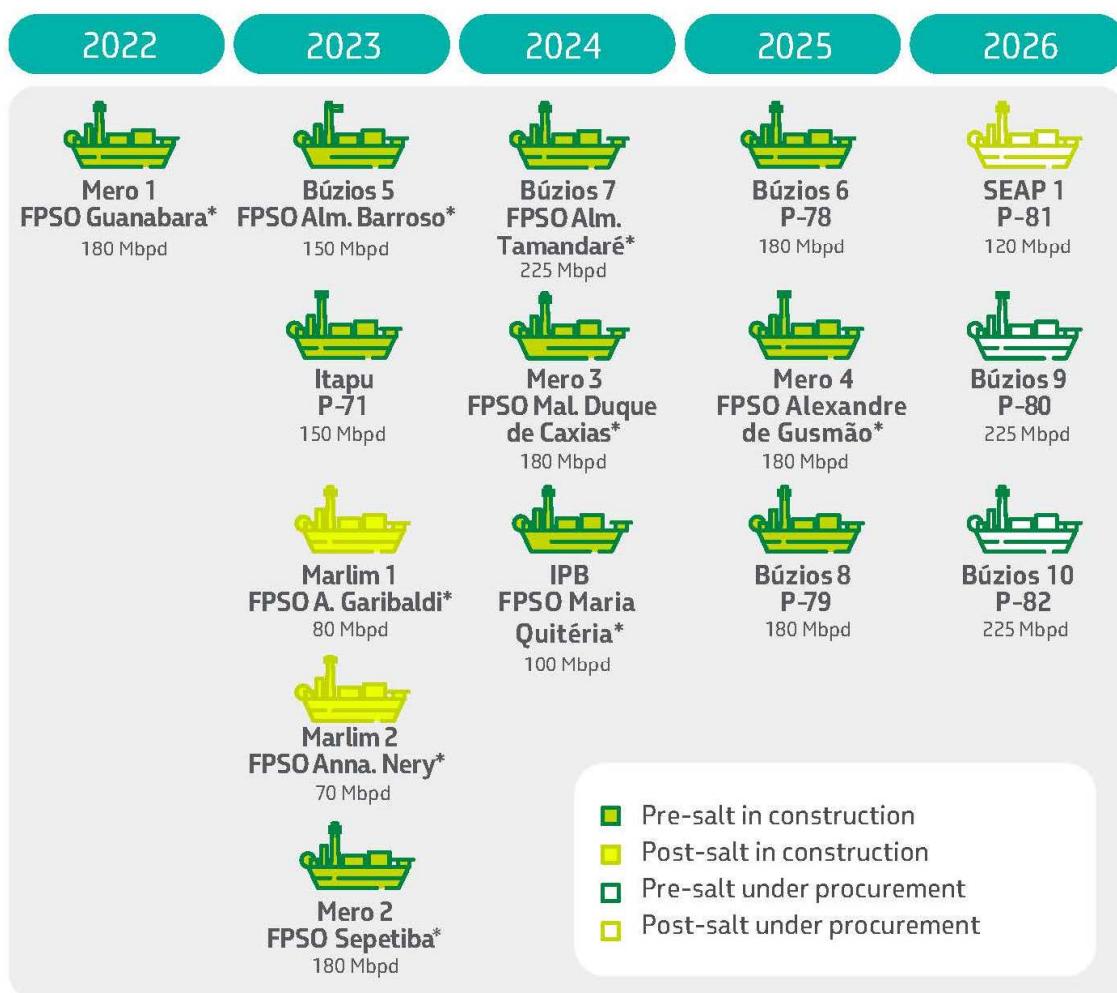
On December 17, 2021, we acquired the exploration and production rights to the volumes exceeding those of the Transfer of Rights in the *Atapu* and *Sepia* offshore fields in the 2nd Bidding Round for the Transfer of Rights surplus under the Production Sharing Regime. As a result, we revised the oil and gas production outlook for 2022 to reflect the effect of the aforementioned auction.

The start of production sharing for FPSOs P-70 and *Carioca*, operating in the *Atapu* and *Sepia* fields, respectively, will impact the production outlook disclosed in the Strategic Plan. In 2022, the total production of oil and gas will be decreased to 70 mboed and the range will decrease from 2.7 mmboed to 2.6 mmboed with a variation of +/- 4%. Oil production and commercial production had an impact of about 60 mboed, but remained with the same ranges, 2.1 mmbpd and 2.3 mmboed, respectively, with a variation of +/- 4%. For the period between 2023 and 2026, the average estimated impact for production is a reduction of 0.1 mmboed.

Below, we present the schedule of our new units up to 2026. We believe we are the worldwide leader in investment in these kind of projects. In the next five years, we will have 15 new FPSOs that will come into operation, 12 in pre-salt and three in post-salt. Together, the 15 new platforms will have an installed capacity of 2.4 MMbbl/d. The pre-salt in the Búzios field will receive the largest number of units with six new systems, matching the magnitude and high productivity of this asset. With substantial reserves, low risk and high value generation potential, Búzios is the largest deepwater field in the world.

LEADER IN FPSO PROJECTS

15 NEW FPSOs IN 6 FIELDS: 2022 - 2026



* Leased unit.

From the portfolio of new projects, FPSO Guanabara will be the first to begin operations, with the capacity to process up to 180 thousand bpd. The expectation is that FPSO Guanabara will produce its first oil in the first half of 2022 in the Mero field, in the Santos Basin pre-salt.

The units that we plan to start operating by 2025 are already contracted. The three units planned for the year 2026 are currently in the contracting stage.

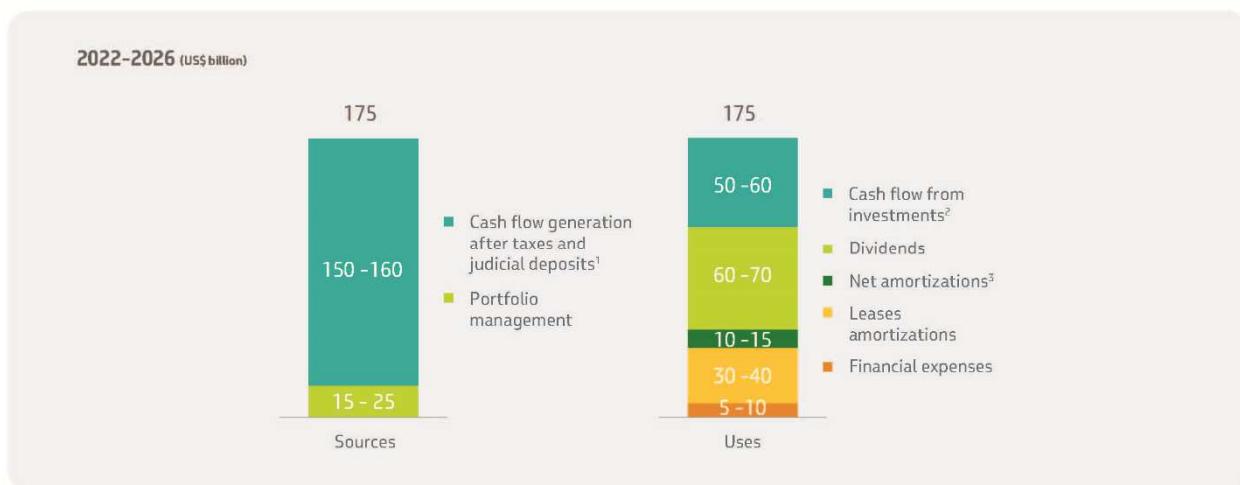
Crude Oil Price and Exchange Rate

Future calculations have been carried out assuming an average Brent Crude Oil price of US\$72/bbl in 2022, US\$65/bbl in 2023, US\$60/bbl in 2024 and US\$55/bbl until 2026 and in the long-term. We assume an average *real/U.S. dollar exchange rate of R\$5.4, R\$5.3, R\$5.2, R\$5.2 and R\$5.1, to US\$1.00 for the 2022-2026 period, for each year respectively.*

Financing

We expect to make our investments outlined by our Strategic Plan without the need for new net fundraising. Through the controlling of costs and a commitment to profitability, we foresee sources of funds in the amount of US\$175 billion in the 2022-2026 period, arising from operating cash generation and divestments. These resources will cover our planned investments, as well as the quest to maintain indebtedness and distribute dividends, as shown in the following figure:

EXPECTED FREE CASH FLOW GENERATION



¹ Consider decommissioning costs of about US\$ 1 billion/year.

² Excludes leases classified as total CAPEX.

³ Consider funding of US\$ 5 billion.

NOTE: Considers US\$8 billion of reference cash.

Our Strategic Plan mirrors the importance of a strong company that is healthy and generates resources. In the Strategic Plan's future, we forecast the payment of total taxes and government's share of US\$65-70 billion. When added to our dividends, this amount, which will go to the federal government and all the other shareholders, represent over 86% of our expected operational revenue generation.

Low Carbon and Sustainability Commitments

We contribute to economic, social and environmental development through the following actions: (i) investing resources and technologies in the production of low carbon oil in Brazil, generating energy, and relevant revenues to finance a responsible transition; (ii) investing in the ability to offer gas and dispatchable energy to enable the high share of renewables in the Brazilian electricity matrix; (iii) investing and prospecting new possibilities in products and businesses with lower carbon intensity; (iv) promoting research and development of new technologies and low carbon solutions and (v) investing in socio-environmental projects for the recovery and conservation of forests.

We have reinforced our ten sustainability commitments and plan to invest approximately US\$2.8 billion over the next five years in our low carbon and sustainability commitments, which will be distributed through initiatives in the decarbonization of our operations, biorefining (renewable diesel and bio jet fuel) and the development of competencies for the future through Research and Development ("R&D") in modern renewables, low carbon products and CCUS. For more information on our ten commitments, see "Environment, Social and Governance - Environment" in this annual report. 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, CO₂ reinjection and energy efficiency gains in our operations.

In September 2021, we announced our ambition to achieve net zero greenhouse gas emissions from operations under our control (scopes 1 and 2), and our intention to leverage our influence to achieve the same ambition in non-operated assets in a timeframe compatible with that established by the Paris Agreement.

The Carbon Neutral Program aims to speed up and reduce costs related to decarbonization solutions, placing us in a more competitive position. The program also involves opportunities related to scope 3, which describes indirect greenhouse gas emissions related to customer use of our energy products, and will be supported by a dedicated decarbonization fund with a budget of US\$248 million for the next five years, which may be used in initiatives involving scopes 1, 2 and 3.

Over the past 12 years, we have improved our carbon efficiency in the E&P segment by 48% and our pre-salt fields have already low upstream GHG intensities when compared to other global oil fields.

Digital Transformation

We believe that, as an energy leading company, it is important to continuously evolve and deploy high value innovative industrial solutions leveraged by digital technologies. Therefore, we continue to develop a consistent and integrated innovation system aligned with our strategic pillars.

In 2019, with the aim to accelerate value creation with innovation and digital transformation, we have consolidated all technology units into one integrated structure.

Our digital transformation and innovation strategy is anchored in five fundamental goals 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.

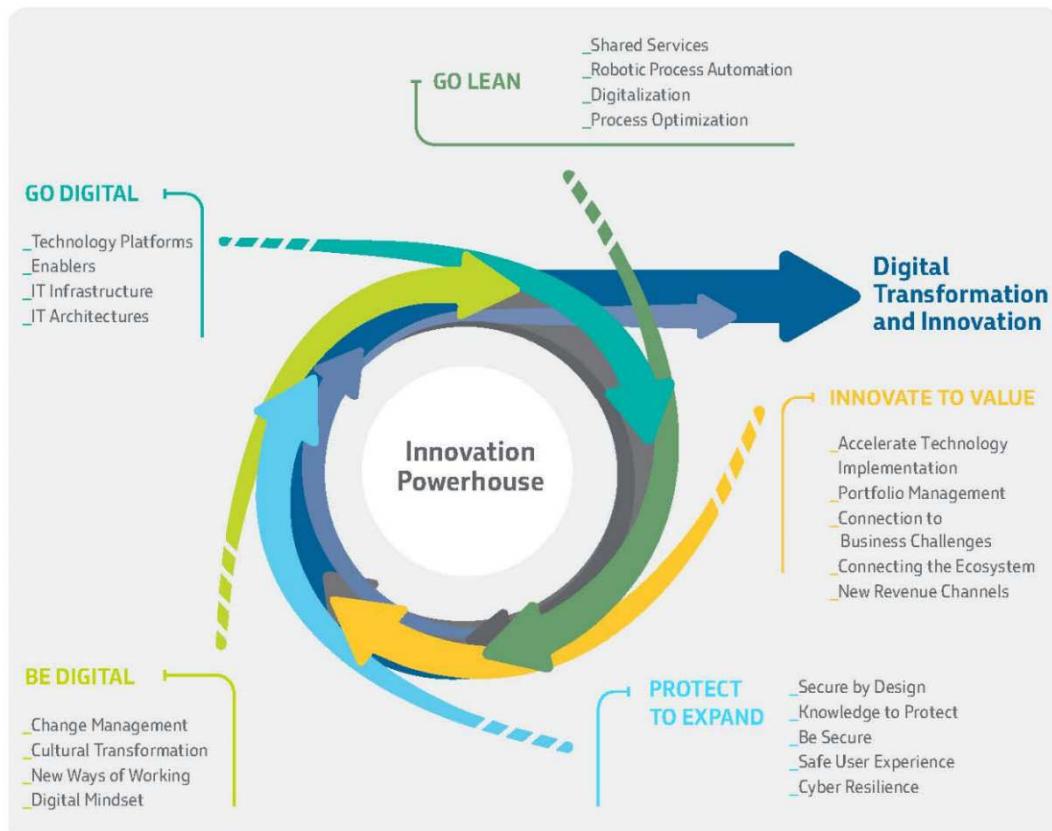
Go Lean: Focuses on optimizing and automating processes.

Innovate to value: R&D CENTER - Portfolio thinking, enhancing time to market and technology adoption, Connections for Innovation ecosystem and new revenue channels.

Protect to expand: Information security facilitating and accelerating Digital and Cultural Transformation through personnel, enabling innovation.

In addition, we implemented the **Connections for Innovation** program, a systematic effort to foster our innovation ecosystem, create and leverage the potential of new technology and our human capital, accelerating the rate of innovation in our businesses.

5 STRATEGIC GOALS FOR 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 cloud computing technology, we are seeking innovation as well as a modern IT architecture that enables value extraction from our data. This opens up the path to digital solutions with integrated data platforms and up-to-date technologies, such as artificial intelligence.

Our main achievements in 2021 were:

- The deployment of DRAGÃO, the largest and most environmentally friendly supercomputer in Latin America¹. Together with Atlas and Fênix, these supercomputers are part of a project that, combined with intense use of public cloud technology, have greatly increased our high-performance computing capacity by 1,200% since 2018, measured in computing performance. We achieved 42.4 PetaFLOPS RPeak in 2021 in comparison to 3.4 PetaFLOPS RPeak in 2018. Our high-performance computing investments are essential to support upstream strategic programs, such as EXP100 and PROD1000. For more information about EXP100 and PROD1000, see "Our Business – Exploration and Production."
- The deployment of the first phase of SAP EHS, part of the #Trans4mar program, which will support a step change in management, data integration, standardization and simplifications for environment, health and safety processes, as well as the deployment of SAP Ariba (Procurement), SAP Concur (expend management), Blackline (accounting reconciliation), Intelligent Asset Management (industrial asset reliability) and Celonis (process mining). #Trans4mar is a program that brings together initiatives for the implementation of SAP S/4 HANA at our company, acting as a digital enabler for Industry 4.0 through corporate and business selective processes review, simplification, digitization and integration. This program began in 2020 and is expected to be fully implemented by 2023.
- Our Digital Twins efforts in both upstream and downstream, have won the distinguished "IT Midia" national award in the Energy sector for us. The implementation of Digital Twins tool in downstream efforts starting in 2020 has enabled our refineries (REPLAN, REVAP, REPAR, RECAP, REGAP, REDUC, REFAP, RPBC, REMAN, RNEST and LUBNOR), to operate in 2021 above 80% of the time in the optimal yield range, with gains of US\$255 million in 2021, by reducing costs through a global optimization of our refineries that are able to operate at optimal performance at all times, at any market conditions and regardless of the types of oil at our disposal.
- We have started the implementation of a new Customer Relationship Management ("CRM") digital platform that will consolidate and enhance quality in interaction channels with clients and stakeholders through a cloud-based, market solution for internal and external market trading, as well as natural gas commercialization.
- The launch of a Center of Excellence in Cloud Computing ("CCC"), which will direct and accelerate our cloud adoption journey. This gradual cloud adoption will be accomplished in partnership with large players in the technology sector, such as Amazon and Microsoft. The CCC joins the Center of Excellence in Analytics and Artificial Intelligence ("CoE") and the Center of Excellence for Process Robotization and Digitalization ("CERD"), which combine expertise, process and technology platforms and deliver value across our value chain through digital technology.

¹ According to the TOP500 and GREEN500 list, published in June 2021, at www.top500.org.

Be Digital

In 2021, we continued the adoption of methodologies and mindsets that support a culture of digital innovation aimed at generating results. In this regard, we highlight the expansion of: (i) corporate innovation initiative; (ii) safety innovation labs; (iii) digital academy; and (iv) the application of agile methodologies and practices.

Corporate Innovation Initiative

Our Corporate Innovation Initiative seeks to enable the entire company to innovate by providing mentorship, training, and channels to access the external innovation ecosystem. In 2021, the initiative has delivered: (i) the internal startups program; (ii) challenge-based students' programs; and (iii) startups and innovation ecosystem connection. We seek to go beyond financial benefits in order to also promote entrepreneurship that strengthens our culture of ownership and accountability. The way forward is to expand its role as an innovation hub and accelerator, enabling the company to deliver the first step on innovation life cycle quickly and accurately, while connected with innovation ecosystems.

Safety Innovation Lab

We also consolidated the Safety Innovation Lab ("SafetyLab"), a laboratory focused on operational safety and health by implementing digital solutions that have been developed and tested in an agile way in controlled and representative environments. This is done in order to offer solutions to predict and prevent risks by actively monitoring work or reducing risk exposure by improving the use of wearables, intelligent video analytics, robotics and drones, for example. The main Lab deliveries were: (i) success of wearables aimed at attention monitoring, geolocation and more comfortable and safe personal protective equipment ("PPE"); (ii) implementation of intelligent video analysis systems for smoke and fire detection and for detection of use of masks and equipment stockpiles; (iii) use of robots and drones in risky activities such as underwater mini drones for offshore inspection and monitoring activities, drones to inspect electric power transmission lines, cargo drones to support the mooring and unmooring operations of Relief Vessels and drone for visual inspection inside spheres; and (iv) applications to promote physical health, such as new fire resistant materials for improving overall safety and wrist straps with fatigue sensors. The actions developed throughout the year contributed to the safety and health of our workers.

Digital Transformation Academy

Companies are transformed by its people and our digital transformation is supported by investments in digital education programs for employees. Since the second half of 2020, our Digital Transformation and Innovation Academy ensures that employees would have the necessary upskilling and reskilling training available. Since its creation, our employees have completed 21,850 courses provided by the Academy. The current portfolio has 61 reskilling programs, allowing the company to increase the number of skilled professionals such as data scientists, data analysts, cloud architects, security analysts and product owners, among other critical tech specialists.

Expansion of agile methodologies and practices

We continued advancing the use of agile principals to accelerate results and stimulate innovation. In 2021, we expanded from 100 to 400 agile teams that are now present in 70% of our business units. The Center of

Excellence in Agility offers training and direct support of agile coaches to enable transformative initiatives such as the adoption of agility at scale across the entire organization.

Go Lean

In 2021, our Center of Excellence for Process Robotization and Digitalization (CERD) has continued to rethink our internal processes, enabling them for digital transformation. Since its creation, in 2020, CERD has optimized, digitized or automated more than 250 processes.

We have strengthened the role of the Process Architect, who is responsible for ensuring an integrated and lean view of our processes, with a focus on meeting customer needs, and leading the implementation of technology in partnership with technology professionals as per business requirements.

In addition, we have identified some key factors as being a priority for our current focus, such as guaranteeing availability, digitization of information and inserting concepts from smart office and our digital shared services center.

We continue to accelerate the modernization of workplace environments in connection with the implementation of a hybrid work model, which combines teleworking and office work, by using smart office and coworking concepts according to each local business chain needs in order to maximize building occupancy.

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. To this end, we began the evolution of our Shared Service Center. Over 600 processes were reviewed based on the feedback from our internal customers and a series of opportunities identified by our teams. Around more than 2,000 hours of online training were carried out by our workers to implement new or revised processes and new internal customer service channels were launched, including an integrated platform to measure and evolve our customer service.

Innovate to value

We use innovation and ideas from our research and development center as tools to expand the value creation and influence our strategy, focusing on new production frontiers, continuous improvement in operations and new opportunities.

We have a history of successfully developing and implementing innovative technologies, from oil basin exploration, deployment of production systems in deep waters to refining and production of oil derivatives and Petroleum products. Our efforts received four OTC awards (1992, 2001, 2015 and 2020). Furthermore, in 2019, the Brazilian edition of the Conference (OTC Brasil) also granted us a Distinguished Achievement Award.

We are investing in digital technologies to optimize the refineries' operation in an even more efficient way, with flexibility and safety. Our R&D is working towards the development of new process technologies to modernize our refineries, aiming to be positioned at the top quartile considering Solomon Associate's worldwide fuels refinery performance analysis.

Furthermore, our R&D project portfolio supports market diversification initiatives in an energy transition context, to prospective revenue channels where technology is an advantage, such as CO₂ Capture, Use and Sequestration ("CCUS"), Biofuels and renewable products, as well as the development of new products and commercialization methods.

We also have several semi-industrial scale prototype plants that are located at our industrial facilities and are aimed at fast prototyping and scaling up new industrial technologies at reduced cost.

Our research and development center ("CENPES") is one of the largest facilities of its kind in the energy sector as well as one of the largest in the Southern Hemisphere. The CENPES facility has a total area of 308,000 m² and includes 116 laboratories and more than 4,700 pieces of equipment with cutting edge technology. The facility's laboratories are dedicated 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, 2021, this facility had 1,106 employees, 246 and 320 of which have doctorates and master's degrees in the sciences, respectively, and a team of 990 professionals that are dedicated to R&D. In 2021, we engaged in several activities relating to research and development; we also conducted joint research projects with universities and research centers in Brazil and abroad, as well as with suppliers, startups and other operators in order to develop technologies to support the Strategic Plan, in addition to anticipating trends that can create new strategic options.

In 2021 we invested US\$563 million in research and development. Currently, about 25.2% of our R&D portfolio is intensive 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, 2021, our research and development operations were awarded 327 patents in Brazil and 83 overseas. Our patents portfolio covers all of our areas of activities. Currently, we have 996 patent applications under examination, 420 in Brazil and 576 abroad, within more than 40 countries.

In 2021, we filed 118 patents, surpassing our all-time record in 2005 and the record for filings in a single year among national institutions.

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.

Protect to expand

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. Since 2020, we have utilized the Center for Excellence in Treatment and Response to Security Events. This Center for Excellence is focused on the cyber protection of our technological and operational assets, including industrial and control systems, so that we have solid processes to protect our digital environments in line with the best market practices, and is subject to constant improvements. Based on reference frameworks and with oil and gas industry peer benchmarks, we developed a work plan that has elevated us in our market regarding security management maturity, both in corporate and automation environments.²

We carry out penetration tests throughout the year, as part of our operational routines. All detected cyber-attack attempts were promptly identified and properly managed by our security ecosystem, including people, processes and security technology. We did not suffer successful cyber-attack penetrations into our systems that caused impacts in our operation.

We also lead a national intelligence network with 50 organizations that share information about cyber-attacks, considerably improving our preventive processes and defenses.

In 2021, we were accepted as a member of a selected world reference forum in information security. This forum brings together a wide variety of cyber security and incident response teams, including industrial, government, commercial and academic sectors with representation from different countries. This

² According to NIST (National Institute of Standards and Technology) Cybersecurity Framework ("CSF") and Gartner's IT Score for Security and Risk Management.

organization works mainly with prevention, helping to increase the level of maturity of information security on a global scale.

Privacy is another relevant topic for us. We see the legislation on the protection of personal data as an opportunity to evolve our system to greater maturity, adding continuous improvements to our privacy processes. According to Brazilian 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.

To this end, we have created a program to conform to the LGPD with a multidisciplinary and dedicated approach. This process is conducted through a governance model, adoption of technical and administrative measures to respond to legal requirements, mitigate data breaches risks and guarantee the data rights of its employees and stakeholders as data subjects.

Connections for Innovation / Centers of Excellence (CoE)

In the last three years, we have increased our efforts to foster our innovation ecosystem, both internally and externally, to create and leverage the potential of new technologies and our human capital, accelerating the application of innovation in our businesses. The following diagram summarizes our main areas of interest and the several different components of our innovation ecosystem.



Centers of Excellence: Digital transformation is a strategic priority for us as it is a powerful ally for the technology and R&D activities needed to enable our strategic plans. To accelerate innovation and deliver best in class technologies and digital products, our projects incorporate agile methodologies and digital technologies, such as AI and analytics, high-performance computing, IoT and robotics, using integrated data platforms, cloud, composable architecture, cyber-security, agility at scale and digital process optimization. To support our digitalization, we created centers of excellence such as the Center of Excellence in Analytics and Artificial Intelligence and the Center of Excellence in Robotization and Digitization (CERD).

An important development in 2021 was the launch of the website <https://tecnologia.petrobras.com.br>, which aims to be a systematic approach with the external ecosystem. The site hosts the program called '*Petrobras Conexões para Inovação*' (Connections for Innovation), which compiles all of our open innovation initiatives. The information on this website, which might be accessible through the hyperlink resulting from this URL, is not and shall not be deemed to be incorporated into this annual report.

Our Connections for Innovation program includes the following modules:

- **Startups:** Search for and develop innovative solutions with startups from different areas such as digital technologies, robotics, energy efficiency, catalysts, corrosion, carbon reduction, geological modeling, inspection technologies and water treatment. Currently we have 38 startups working in this module
- **Technological Order:** Development of innovative solutions for our problems where there is a technological risk. The module has already acted in 22 development opportunities.
- **Ignition:** Technological Innovation Program promoted in partnership with a Brazilian university to encourage experimentation, challenging young people to co-create solutions for the digital transformation of the oil and gas sector. The ignition module has engaged 25 students.
- **Solution Acquisition:** As part of our open innovation strategy, we look for startups and other innovative companies that present validated solutions or solutions in the market validation phase, with the potential to meet our selected challenges, running tests in our production environments and validating our requirements for implementation. We already achieved the participation of 15 companies in this module.
- **Technological Partnerships:** Universities, companies and science and technology institutions from all over Brazil and abroad are our great partners in research, development and innovation. The opportunities are endless and everyone wins. The technological partnerships module achieved 900 partnerships and 9,000 researchers.
- **Technology Transfers:** We license technologies for third parties to use in their products, processes, applications, materials and services. There are already 23 contracts using this technology transfer module.

Apart from the Connections for Innovation program, we are also supporting a broader initiative related to the development of innovation ecosystems, participating in the Regional Entrepreneurship Acceleration Program of the Massachusetts Institute of Technology ("MIT Reap") that engages universities, corporations, government, entrepreneurs and venture capital investors.

As a result of the number of partnerships and contracts established with startups, in 2021 we won first place in the Oil and Gas category in the Top Open Corps ranking, promoted by 100 Open Startups, which qualifies the level of engagement of companies in the sector with the open innovation ecosystem in Brazil.

In addition to engaging with the entrepreneurial ecosystem, we also stimulate intrapreneurial activities by promoting the development of innovative solutions by multidisciplinary teams that act as internal startups, using agile methodologies to accelerate our digital transformation.

The internal startup 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.

Environment, Social and Governance

A green-tinted satellite image of the Earth, focusing on Europe and the Mediterranean Sea. The image shows the continent's coastline, major rivers, and some cloud formations against a darker green background.

Environment

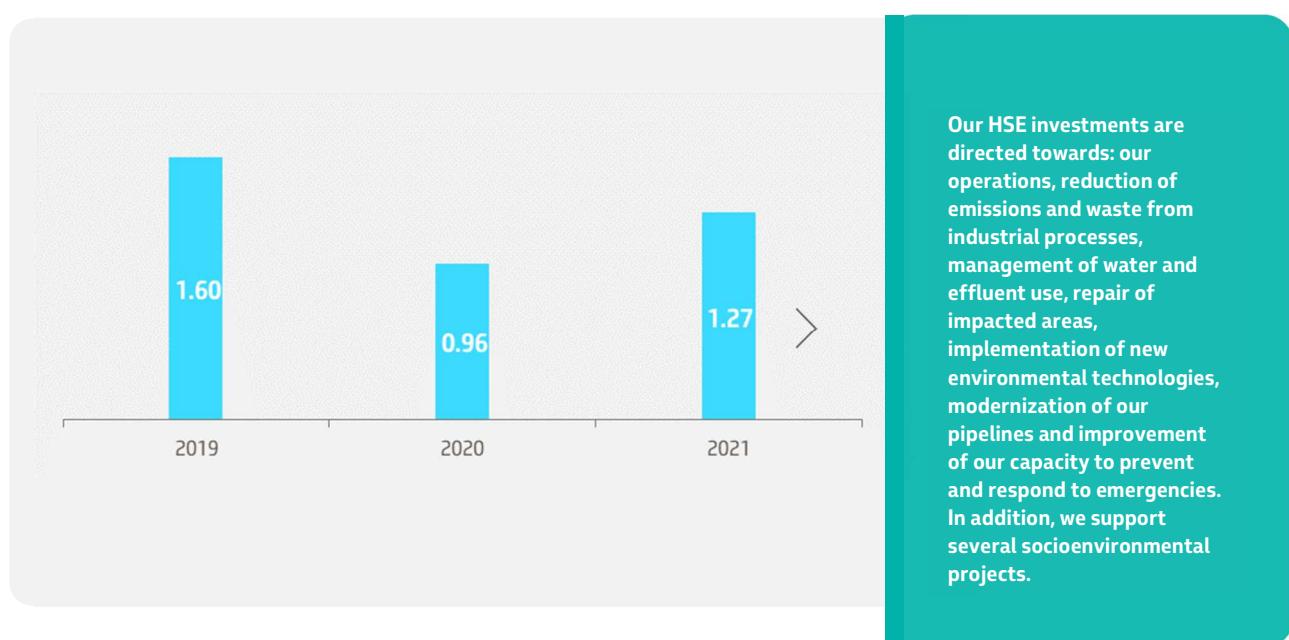
The protection of human health and the environment is one of our primary concerns and is essential to our success. Each year, we maintain a set of initiatives focused on the prevention of accidents and the preservation of life and the environment. For this purpose, in 2016, we launched the Commitment to Life Program, with the launch of the first cycle taking place in October 2016. This Program is composed of structured projects based on the critical analysis of health, safety and environment ("HSE") management, with reference to the best market practices, and seeks to achieve our zero fatalities and zero leaks goals while strengthening our vision of being an example of HSE for the industry with the following principles:

1. HSE as value;
2. Respect for Life;
3. Risk-Based Management;
4. Business Sustainability; and
5. Excellence and Transparency in Performance.

The main initiatives of the Program for 2021 are the following:



HSE INVESTMENTS (US\$ billion)



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, regulations and ESG best practices, according to new commitments formalized in 2021.

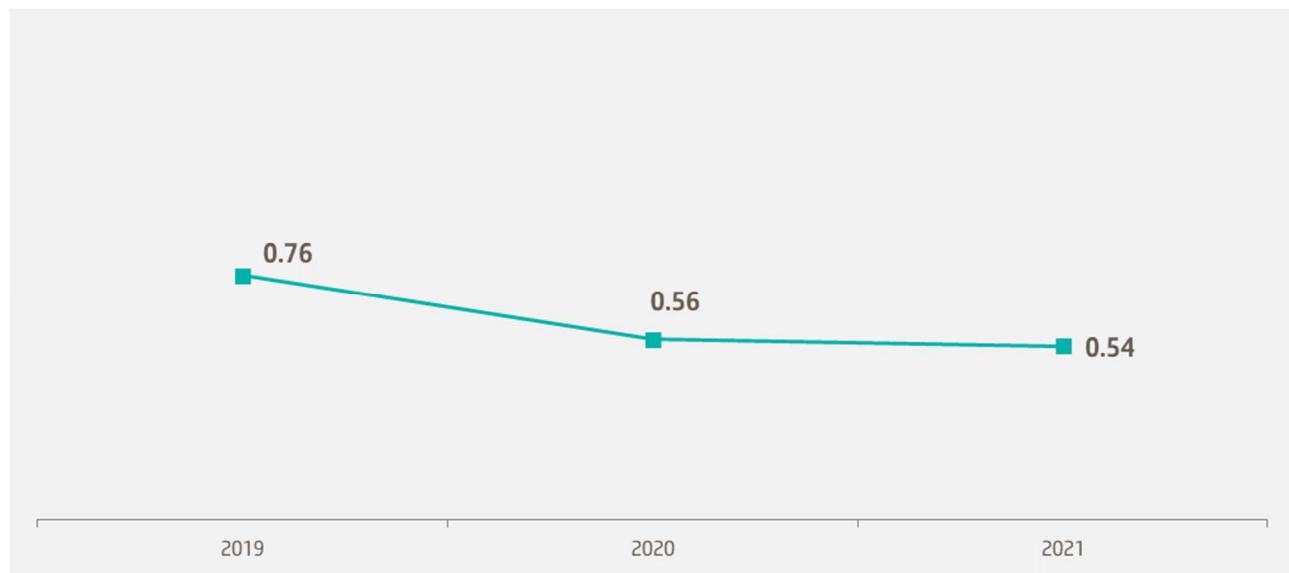
Since 2019, we have been certified by ASCM Enterprise Certification, which is the first-of-its-kind corporate level designation that demonstrates supply chain excellence and transparency – a growing value for consumers as they become more educated about supply chain supporting ethical and sustainable 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 0.54 and three fatalities, in 2021, in our Strategic Plan we established the alert threshold for TRI below 0.7 for 2022, 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 2021, we trained our employees in process safety, HSE aspects in contracts, behavioral auditing and began the construction of the Human Factors Journey, with a greater emphasis on ergonomics in projects and operations.

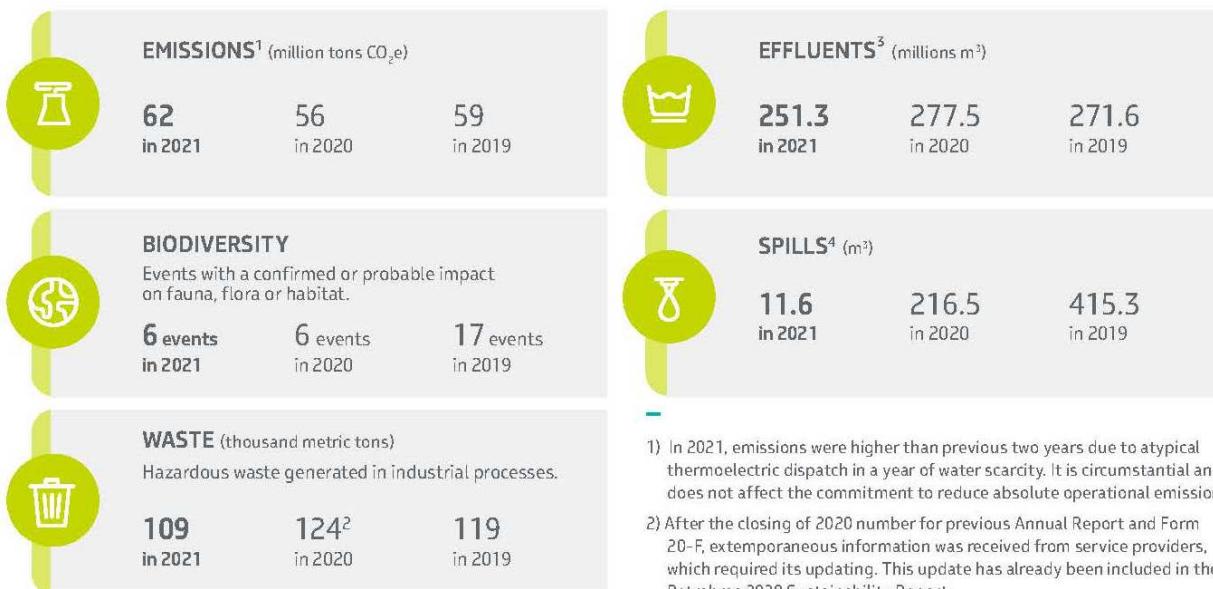
TOTAL RECORDABLE INJURY RATE – TRI⁽¹⁾

(1) The TRI result achieved in 2021 showed a slight improvement compared to the already historic TRI result of 2020.

Although we develop prevention programs in all of our operating units, we recorded three fatalities involving our own and contractors' employees in 2021 (compared to zero fatalities in 2020). 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) In 2021, emissions were higher than previous two years due to atypical thermoelectric dispatch in a year of water scarcity. It is circumstantial and does not affect the commitment to reduce absolute operational emissions.
- 2) After the closing of 2020 number for previous Annual Report and Form 20-F, extemporaneous information was received from service providers, which required its updating. This update has already been included in the Petrobras 2020 Sustainability Report.
- 3) Industrial effluents, produced water and sanitary effluents (the latter included from 2020 on, according to the latest GRI guidelines). The figure does not consider produced water reinjected in the oil/gas reservoirs for the secondary recovery, nor the effluents from open refrigeration systems.
- 4) Sum of oil (or oil products) spills volumes that were individually greater than one barrel, that reached water bodies or non-waterproofed soil. 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. Spills originated by illegal taps were not accounted.

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 2021, we invested US\$708 million in environmental projects, compared to US\$508 million in 2020 and US\$891 million in 2019. 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.

We have established ten commitments in our Strategic Plan for the low carbon and sustainability agenda ¹:

¹ Carbon commitments related to 2015 base. Other commitments based on 2018.

	25% reduction in absolute operational emissions by 2030
	Re-injection of approximately 40 million tons of CO ₂ up to 2025 in carbon capture, utilization and storage projects
	16% reduction in carbon intensity in refining segment by 2025, expanding to 30% by 2030 (30 kgCO ₂ e/CWT)
	Zero routine flaring by 2030
	32% reduction in carbon intensity in the upstream segment by 2025 (15 kgCO ₂ e/bboe, maintained until 2030)
	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
	Investments in social and environmental projects, human rights programs, community relationship and solution to social and environmental problems, involving opportunities for action with our stakeholders and clients of our products.

For more information, see "Strategic Plan" in this annual report.

Spills and Environmental Remediation Plans

Oil and oil product spills totaled 11.6 m³ in 2021, compared to 216.5 m³ in 2020.

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 potential environmental impacts. 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 Búzios 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. In 2021, "Mar Azul" continued, incorporating lessons learned from the events of 2020, which were subsequently transformed into structures and local measures by delivering and improving operating systems, activities and processes, acting jointly on all fronts and acting through active and continuous management in search of improvement opportunities. These actions resulted in a significant reduction of spilled volumes when compared to the beginning of the plan in 2019.

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 2021, even with the Covid-19 pandemic, we conducted 12 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 public support to the TCFD (Task Force for Climate Related Financial Disclosures), and our adoption of SASB as a reference, as well as IPIECA (Global Oil and Gas Industry Association for Environmental and Social Issues), GRI and IOGP as external references of disclosures and performance.
- Our scenarios point to the persistence and importance of oil and gas in the global energy matrix, even though their demand and relative share may decrease in an environment of accelerated energy transition. It is our priority to operate at low costs and with superior performance in carbon, safeguarding the competitiveness of our oils in world markets in the context of deceleration and subsequent retraction in demand in order to thrive in scenarios of low oil prices, carbon prices and possible oil differentiation based on their carbon intensity during production. We reviewed our oil price key assumptions for the 2022-2026 period, with values ranging from US\$72 per barrel in 2022 and assuming a long term price of crude oil of US\$55 per barrel. In order to guarantee the resilience of our portfolio, all projects must also be profitable in our resilience scenario, which provides an accelerated energy transition with a significant reduction in the price of fossil fuels, assuming a value of crude oil of US\$35 per barrel. These are stringent assumptions for the price of oil, compatible with the scenarios contemplated in the Paris Agreement.
- Our current focus is investing in the decarbonization of our operations, development of bioproducts and the acquisition of skills that may allow future diversification in renewables and low carbon

products. In this context, a new governance framework focused on diversifying our portfolio was created for project approval process related to new energy and/or new products that are not in our current Strategic Plan.

It is important to note that the Strategic Plan CAPEX includes the amount of US\$1.8 billion in projects related to decarbonization of operations initiatives, with emphasis on CO₂ separation, methane detection systems, commissioning of closed flare, HISEP™ technology and projects to reduce carbon in refineries, among others. The Carbon Neutral program aims to speed up and reduce costs related to decarbonization solutions, making us more competitive. The program involves opportunities and will be supported by a dedicated decarbonization fund with a budget of US\$248 million for the next five years, which may be used in initiatives involving greenhouse gas emissions resulting from our activities (Scopes 1 and 2) and indirect greenhouse gas emissions related to customer use of our energy products (Scope 3). We also intend to invest approximately US\$130 million over the next five years in development of competencies for the future through R&D of modern renewables, low carbon products and CCUS.

Our set of carbon targets and goals were reaffirmed in our Strategic Plan. Our operational emissions reduction target covers 100% of operated assets in all our businesses (including power generation), for all greenhouse gases and we believe that this target 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, and since 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 September, we announced our ambition to achieve net zero greenhouse gas emissions from operations under our control (scopes 1 and 2), and our intention to leverage our influence to achieve the same ambition in non-operated assets, in a timeframe compatible with that established by the Paris Agreement. The decision is aligned with the global positioning of the 12 member companies of the Oil and Gas Climate Initiative ("OGCI"), of which we have been part of since 2018.

In 2021, our performance in terms of GHG emissions was as follows:

- Total GHG emissions of 62 million tCO₂e, compatible with our target to reduce total operational GHG emissions by 25% by 2030, compared to 2015;
- Carbon intensity in E&P of 15.7 kgCO₂e/boe², on track for achieving the medium-term target of 15 kgCO₂e/boe in 2025, maintained until 2030;
- Carbon intensity in refining of 39.7 kgCO₂e/CWT³ on track for achieving the medium-term target of 36 kgCO₂e/CWT in 2025 and of 30 kgCO₂e/CWT in 2030.

Our carbon intensity targets (E&P and Refining) represented a coverage of 67% of emissions from activities that we operated in 2021.

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. The Connections for Innovation – Startups Module, conducted in partnership with SEBRAE, the Brazilian support service for micro and small enterprises and a non-profit private entity, included carbon reduction as

² The kg CO₂e / boe indicator considers gross oil and gas production ("wellhead") in its denominator.

³ The kg CO₂/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 CO₂/CWT indicator, according to our original identity. We also monitor an adapted indicator: kg CO₂e / CWT, to enable the inclusion of emissions from other GHG (for example methane), which, however, represents a small portion of our refining emissions.

a topic for both iterations in 2019 and 2020. The selected companies in 2020, Alfa Sense, Immer Messen and Energética Resíduos e Energia, will work in a cooperation agreement to achieve GHG emissions reductions in our operations. Pam Selective Membranes, which was one of the winning companies in the 2019 competition, is working on carbon capture technology.

In addition, we note that our Climate Change Supplement is available on our website at www.petrobras.com.br/ir, which details our contributions to reducing the carbon intensity of our energy supply and how we aim to remain competitive in an evolving context. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.

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 Rights Guidelines:** direct our actions, as far as respect for human rights is concerned, in all the activities and regions where we operate and throughout the life cycle of our projects and operations.
- **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 Violence	National pact for the eradication of slave labor	Business initiative for racial equality Open letter enterprises for human rights	Early childhood national network

In 2021, we once more secured recognition in the 2021 UN Women's Empowerment Principles ("WEPs") Brazil Award, which is 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 2021, we also won the 6th Seal of the Federal Government's Pro-Gender and Race Equality Program.

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").

The 4th Edition of the Best Suppliers Award in 2021 included the Human Rights Emphasis in the ESG Category, with the following themes:

- Diversity and Inclusion;
- Fight against prejudice, discrimination, and harassment;
- Eradication of child labor;
- Eradication of slave labor, or practices similar to slavery;
- Confronting the sexual exploitation of children and adolescents.

In May 2021, we launched a public selection of socio-environmental projects. Until 2024, we will allocate approximately US\$7.3 million for initiatives that will be developed within strategic themes for the business and in communities neighboring its operations, covering 57 municipalities in the states of Espírito Santo, Rio de Janeiro, São Paulo, Paraná, and Santa Catarina. Of the total amount to be invested, approximately US\$2.5 million will be directed to social projects with incentives, i.e., supported by the Sports and Culture Incentive Law of the State of Rio de Janeiro (State Law No. 8,266/2018). In this selection process, 23 new projects were considered in the four lines of action of the Petrobras Socio-environmental Program - Education, Sustainable Economic Development, Climate (now called Forest) and Ocean.

These initiatives will contribute to overcoming sustainability challenges related to our business, including the transition to a low-carbon energy matrix. Projects were selected in 2021 from several ocean-related proposals that work with endangered marine species and important coastal ecosystems such as Guanabara Bay in Rio de Janeiro, and the coasts of the states of São Paulo, Paraná and Santa Catarina. In the climate line of action, now called Forest, the selected projects aim to contribute to the sustainability of the business insofar as they work to reverse the environmental degradation processes in watersheds that are critical for the units and for the environment, as well as in sensitive ecosystems such as mangroves.

All these climate projects have among their goals the conservation and/or recovery of the environments in which they operate, promoting carbon sequestration and contributing to reduce emissions. Additionally, both the projects selected in the Climate and Ocean performance lines work in areas covered by Petrobras units, contributing to biodiversity conservation and, therefore, also positively related to this sustainability commitment.

To ensure respect for human rights, our business strategies are guided by our Human Rights Guidelines, which are recognized nationally and internationally in all regions where we operate and throughout the life cycle of our projects and operations. Our human rights operations follow the United Nations' Guiding Principles on Business and human rights and are structured along four axis: People Management, Community Relations, Engagement 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. Human rights are 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 action 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 to identify and mitigate potential human rights impacts to communities or within supply chain activities. 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.

In January 2021, the Petrobras Human Rights Commission was established, enlisting 20 areas of the company. The Commission is responsible for implementing the Human Rights agenda, set by Petrobras Human Rights Guidelines, ensuring that this agenda is broadly and transversally integrated into our business.

The Human Rights Commission is divided into three subcommissions: Human Rights Training, Diversity and Inclusion and Human Rights Due Diligence.

In June 2021, we approved an action plan with an annual average of 70 actions to be implemented until 2025. Our Human Rights Action Plan is monitored periodically by the ESG Corporate Forum and HSE committee of the Board of Directors.

As a result, we were one of the 12 companies selected by the UN Global Compact Network Brazil to include a case related to Human Rights in the UN Human Rights Guiding Principles publication which celebrated its tenth anniversary in 2021. The case "Integration of the agenda of respect for Human Rights in Petrobras' Business" was evaluated in the Public Commitment category.

Community Relationship

We are committed to maintaining a long-term community relationship based on dialogue and transparency. To achieve this, we seek to understand the dynamics of the communities that neighbor the sites where we operate and to develop relationship plans which we monitor and evaluate.

We 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 2021, our community relationship activities carried out 193 interactions in communities, including online meetings with community leaders through community committees, visits, and events.

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 2021, 28 new risk assessments were required to support projects passing through formal planning procedures.

Additionally, we strengthened 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 communities, and overcome sustainability challenges. Our portfolio included 94 projects in 2021.

In 2021, investments and donations directly transferred to society via social and environmental projects totaled US\$33.9 million compared to US\$22.2 million in 2020. We invested US\$15.9 million in social and

environmental projects while donations grew significantly during 2021, amounting to a total of US\$18.0 million as a result of contributions to society related to the Covid-19 pandemic.

Additionally, in order to align our social performance with those practiced by the industry while recognizing the importance of helping those who became even more vulnerable during the pandemic, we launched a program to support families in socially vulnerable situations in September 2021. This social program will last 15 months and aims to help ensure that vulnerable families neighboring the sites where we operate have access to essential resources, especially food and cooking gas, or more specifically, LPG. The program amounts to US\$53.8 million (of which US\$4.8 million was spent during 2021) and will last until December 2022.

Our Responses to the Covid-19 Pandemic

Employee and suppliers's health

The outbreak of the Covid-19 pandemic and the measures necessary to contain the virus transformed 2020 and 2021 into unprecedented years. In line with our commitment to health and safety, we are engaged in the effort to mitigate the effects of the Covid-19 pandemic, the largest in the last century.

Our core operational activities during the Covid-19 pandemic were not interrupted and were carried out consistently and in accordance with the strictest standards of safety and health, in full compliance with guidelines provided by the responsible health agencies and current scientific findings.

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 temporary structure, composed of many 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 631,843 tests in our workforce by December 2021; (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 offshore or onshore, 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; (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 suspected Covid-19 symptoms, to be completed weekly. We monitor suspected cases and their contacts from the first report, taking all preventive 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 monitor the practices and measures related to the prevention of Covid-19 in our charted units, ships and contracted teams to ensure legal compliance with our protocols.

In the second half of 2021, as the Covid-19 cases were consistently declining in Brazil, we decided to begin our return to in-person work. Leading by example, our Board of Directors and high-ranking officers returned to the office in August 2021. For our administrative workforce, we have a permanent model (voluntary adhesion) of remote work up to three days a week. The return to in-person work and the actual application of this model, has been implemented in waves since October 2021, according to the context of the Covid-19 pandemic.

To this end, we implemented several health safety measures in our administrative and operational facilities, such as (i) reinforcement of cleaning routines; (ii) installation of touchless drinking fountains; (iii) distribution of thermos bottles for personal use and PFF-2 masks for employees; (iv) development and deployment of technologies for pandemic safety.

In December 2021, 96.9% of our workers were fully immunized (having had at least two doses of vaccines requiring a two-dose regimen or one dose of vaccines requiring only a single-dose).

These efforts have allowed the continuity of our operational activities that ensure the provision of essential goods and services, while always preserving the safety and health of all of our employees.

Contributions to Society

In 2021, we supported governmental or non-profit institutions in responding to the emergency situation resulting from the Covid-19 pandemic through mobilization of resources and various donations towards social and health initiatives, mainly aimed at the existing communities in the scope of our business. The communication channels we traditionally use in such communities continued to publicize our solidarity campaigns, as well as health information to combat Covid-19.

Additionally, in 2021, Cenpes had a relevant role in our efforts to combat and mitigate the effects caused by Covid-19. At our research center, our scientists and technicians led an effort to return oxygen cylinders to suppliers in order to make them available to help fight the Covid-19 pandemic, resulting in the return of 900 oxygen cylinders throughout 2021, contributing to the increased availability of oxygen cylinders in our country.

Our scientists also used their expertise to study and develop, in a very short time, technical specifications for the acquisition of micro plants for the production of oxygen. We purchased and donated 12 micro-oxygen plants to states in which we have operating units and had high rates of Covid-19 infection and mortality. Each micro plant had the capacity to produce 25 m³/h, a volume that can supply oxygen to 100 hospital beds, 21% of which are in the intensive treatment unit, which represents up to 80% of a hospital's consumption, depending on the size of the unit. These plants were donated as part of a set of actions we led to help society fight the Covid-19 pandemic.

Our 2021 financial contributions to projects to combat the Covid-19 pandemic by way of donating fuel, oxygen cylinders, micro-oxygen plants, food baskets, medicine kits and LPG cylinders totaled US\$18 million for the year ended December 31, 2021.

Corporate Governance

Good corporate governance and compliance practices are a pillar of support for our business. In recent years, we have made significant advances in our corporate governance and in our integrity, compliance and internal controls systems. We have also adopted rigorous ethics and integrity standards through initiatives that reinforce our purpose, values, and commitment to continuous improvement and alignment with the best market practices.

Our corporate governance model has a set of rules and procedures that seek to ensure that our decisions are aligned with good governance:

OUR MAIN GOVERNANCE PRACTICES



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.

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.

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.

Regarding our decision-making process, our Bylaws define the board advisory committees that review all matters submitted to the Board of Directors prior to a decision. Additionally, in order to ensure transparency in our most relevant decisions, we use 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 denunciations of fraud, corruption, money laundering, harassment, discrimination, HSE and other issues.

We also made continuous efforts and moved forward on this issue by approving our Code of Ethical Conduct and the Ethical Conduct Guide for Suppliers that contributed to our return to the World Economic Forum's Partnership Against Corruption Initiative ("PACI").

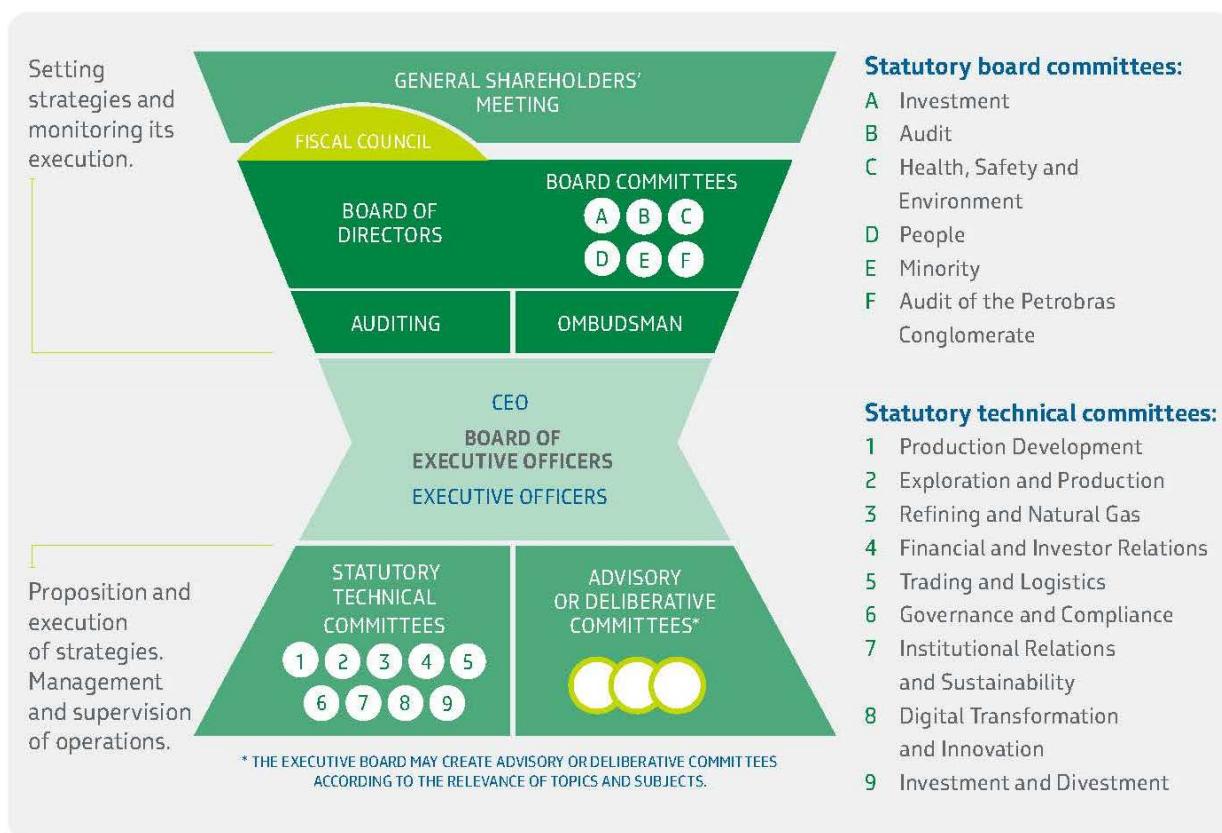
We are part of the special Level 2 corporate governance listing segment of the B3, which demands compliance with differentiated governance regulation and the improvement of the quality of the information we provide. This voluntary move to Level 2 of the B3 reinforces our advances in corporate governance 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 on our website), as listed here:

- | | |
|---|---|
| 
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 |
| 
Dividend Policy | 
Indemnity Commitment Application and Governance Policy |

Major Recognition

In 2021, we rejoined the Brazilian Institute of Corporate Governance ("IBGC"). We were a member of IBGC from 2002 to 2015 and we rejoined after having implemented several improvements in our governance and adoption of compliance measures.

This return ratifies our commitment to the continuous improvement of our processes and internal controls, as well as our alignment with the market's best corporate governance practices and our commitment to redeem and reinforce our corporate values: respect for life, people and the environment; ethics and transparency; overcoming and trust; market orientation and results. We continue to strengthen our governance, in line with the best market practices, with the objectives defined in our Strategic Plan, and with the applicable legislation and regulations.

We also received, for the fifth time in a row, the certification in the Governance Indicator of the Secretariat for Coordination and Governance of State-Owned Companies ("IG-Sest"), of the Ministry of the Economy, achieving their best level, Level 1, which shows our high degree of excellence in corporate governance.

This certification, besides acknowledging our advances in recent years, is an opportunity to assess our processes at a new level of quality and reaffirm our commitment to the continuous improvement of our corporate governance.

In 2021, we reached 94% adherence to the Brazilian Code of Corporate Governance ("CBGC"). According to the latest survey released by the IBGC, the degree of adherence of companies in the market averaged 58.7% in 2021.

We believe that the results we have achieved prove the recognition of the market and control bodies regarding the improvement of our culture of integrity and of our governance mechanisms. We believe that a high degree of integrity reinforces our reputation among our stakeholders and, consequently, within society as a whole.

As a result of our efforts and initiatives in the environmental, social and governance sectors, in 2021, we once again were listed on the Dow Jones Sustainability Index World ("DJSI World") of S&P Global's Corporate Sustainability Assessment. We received the highest score in the Materiality, Environmental Report, Water-Related Risks and Social Report criteria. We also stood out in the criteria of Climate Change, Operational Eco-efficiency, Corporate Citizenship and Philanthropy, Labor Practices and Social Impact in the Community. We had left the index in 2015 and this result was great recognition of our progress.

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: (i) examine the administrators' account, examine, discuss and vote on the financial statements; (ii) decide on the allocation of net profit for the year and the distribution of dividends; and (iii) elect the members of the Board of Directors and Fiscal Council. 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
Director Independence		
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 capital (at least 50% plus one share) 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 recuse 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.

Section	New York Stock Exchange Corporate Governance Rules for U.S. Domestic Issuers	Our Practices
<hr/>		
Compensation committee		
303A.05	<p>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.</p>	<p>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.</p> <p>As a controlled company, we are not required to comply with the compensation committee requirement.</p>
<hr/>		
Audit committee		
303A.06		
303A.07	<p>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.</p>	<p>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) assess the independent auditor's qualifications and independence, and the performance of the independent audit functions, (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.</p>
<hr/>		
Equity Compensation Plans		
303A.08	<p>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.</p>	<p>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.</p>

Section	New York Stock Exchange Corporate Governance Rules for U.S. Domestic Issuers	Our Practices
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Corporate Governance Guidelines

303A.09	Listed companies must adopt and disclose corporate governance guidelines.	<p>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 at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.</p> <p>We also have a Corporate Governance Policy, approved by our Board of Directors, which establishes our governance principles and guidelines. This policy applies to our company and our affiliates, pursuant to Article 16 of our Bylaws.</p>
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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.	<p>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 our behalf ("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 at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.</p>
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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

We achieved net income of US\$19.9 billion, cash provided by operating activities of US\$37.8 billion, a Free Cash Flow (a non-GAAP measure defined below) of US\$31.5 billion and Adjusted EBITDA (a non-GAAP measure defined below) of US\$43.6 billion.

Operating income in 2021 was US\$37.6 billion, 273% higher than 2020 primarily due to higher Brent prices, which increased 70% year-over-year. This result was also influenced by higher sales of oil products in the domestic market, with higher margins for diesel and gasoline. On the other hand, in 2021 there were lower oil exports volumes, higher LNG acquisition costs and losses with health care plan actuarial review (such losses were related to a partial reversal of a gain obtained in 2020, when there was a reduction of our payments to the plan). Net income attributable to our shareholders was US\$19.9 billion in 2021, an 1,642% increase compared to US\$1.1 billion in 2020, mainly as a result of higher Brent prices and reversal of impairment in 2021 as compared to impairment expenses in 2020.

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 disclosed in Note 36.3(c) 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.

CONSOLIDATED STATEMENT OF INCOME

	As reported (US\$ million)			
	Jan-Dec		Variation	
	2021	2020	▲	▲ (%)
Sales revenues	83,966	53,683	30,283	56.4
Cost of sales	(43,164)	(29,195)	(13,969)	(47.8)
Gross profit	40,802	24,488	16,314	66.6
Selling expenses	(4,229)	(4,884)	655	13.4
General and administrative expenses	(1,176)	(1,090)	(86)	(7.9)
Exploration costs	(687)	(803)	116	14.4
Research and development expenses	(563)	(355)	(208)	(58.6)
Other taxes	(406)	(952)	546	57.4
Impairment of assets	3,190	(7,339)	10,529	143.5
Other income and expenses	653	998	(345)	(34.6)

Operating income	37,584	10,063	27,521	273.5
Net finance expense	(10,966)	(9,630)	(1,336)	(13.9)
Results of equity-accounted investments	1,607	(659)	2,266	343.9
Net income (loss) before income taxes	28,225	(226)	28,451	12,588.9
Income taxes	(8,239)	1,174	(9,413)	(801.8)
Net income for the year	19,986	948	19,038	2,008.2



Exchange rate and 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 annual 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 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 transaction dates.

For more information regarding our functional and presentation currency, see “About Us” and Note 2.3 to our consolidated financial statements.

EXCHANGE AND INFLATION RATES

	2021	2020	2019
Year-end exchange rate (reais/US\$)	5.58	5.20	4.03
Appreciation (depreciation) during the year(1)	(7.4%)	(28.9%)	(4.1)%
Average exchange rate for the year (reais/US\$)	5.40	5.16	3.95
Appreciation (depreciation) during the year(2)	(4.7%)	(30.7%)	(8.2)%
Inflation rate (IPCA)	10.06%	4.52%	4.31%

(1) Based on year-end exchange rate.

(2) Based on average exchange rate for the year.

From January 1, 2022 to March 29, 2022, the real appreciated 14.9% against the U.S. dollar.

Most of our export revenues are denominated in U.S. dollars and our domestic sales are also indirectly linked to the U.S. dollar due to our current policy to generally seek to maintain parity with international product price. Therefore, the devaluation of the *real* is generally favorable to our results as the positive impact in revenues is higher than the negative impact on operating costs, the majority of which are denominated in Brazilian reais.

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 increase. On the other hand, 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 decline. For further information on our prices and recent developments in our pricing policies, see "Sales Volumes and Prices" in this section.
- **Debt service:** The depreciation of the *real* against the U.S. dollar also increases our debt service expenses in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt increases with the depreciation of the *real*. As our 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 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 36.3(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 36.3(c) to our audited consolidated financial statements.

Sales Revenues

In 2021, sales revenues increased 56% compared to 2020, reaching US\$83,966 million, due to the 70% increase in Brent price and the increase in demand in the domestic market, mainly due to the economic recovery after the height of the Covid-19 pandemic. An additional factor was the increase in sales of natural gas and electricity, as a result of the increase in thermoelectric generation in 2021 and industrial demand recovery.



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 average price of Brent Crude Oil, as reported by Bloomberg, was US\$71 per barrel in 2021, US\$42 per barrel in 2020 and US\$64 per barrel in 2019. As of December 31, 2021, the Brent Crude Oil price was US\$77 per barrel.

Consolidated sales revenues were US\$83,966 million in 2021 compared to US\$53,683 million in 2020, primarily due to:

- An increase of US\$29,742 million due to increased margins explained primarily by higher oil products prices;
- An increase of US\$541 million due to higher oil products volumes sold.

	For the year ended December 31								
	2021			2020			2019		
	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$(1))	Sales Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$(1))	Sales Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Net Average Price (US\$(1))	Sales Revenues (US\$ million)
Diesel ⁽¹⁾	292,488	82.86	24,236	251,400	55.39	13,924	264,462	87.00	23,007
Automotive gasoline	149,132	79.86	11,910	125,536	50.29	6,313	137,928	71.12	9,810
Fuel oil (including bunker fuel)	22,125	80.23	1,775	14,669	54.20	795	14,408	71.21	1,026
Naphtha	25,020	67.91	1,699	42,544	39.82	1,694	29,942	55.74	1,669
Liquefied petroleum gas	83,320	53.90	4,491	86,170	39.26	3,383	83,486	49.82	4,159
Jet fuel	27,184	83.54	2,271	21,887	66.48	1,455	43,528	88.04	3,832
Other oil products	59,892	71.14	4,261	66,470	40.80	2,712	60,453	56.41	3,410
Subtotal oil products	659,161	76.83	50,643	608,676	49.74	30,276	634,207	73.97	46,913
Natural gas (boe)	128,504	45.79	5,884	106,890	34.14	3,649	127,583	46.47	5,929
Oil	8,789	76.35	671	1,279	37.53	48	-	-	-
Ethanol, nitrogen products, renewables and other non-oil products	1,422	28.13	40	1,620	36.42	59	2,621	93.48	245

Electricity, services and others	—	—	3,953	—	—	2,302	—	—	2,907
Total Brazilian market	797,876	—	61,191	718,465	—	36,334	764,411	—	55,994
Exports	296,055	72.59	21,491	350,090	45.55	15,945	268,344	67.39	18,085
International sales	16,888	76.03	1,284	31,190	45.02	1,404	36,885	68.05	2,510
Total global market	312,943	—	22,775	381,280	—	17,349	305,229	—	20,595
CONSOLIDATED SALES REVENUES	1,110,819	—	83,966	1,099,745	—	53,683	1,069,640	—	76,589

(1) Net average price calculated by dividing sales revenues by the volume for the year.

Cost of Sales

In 2021, the cost of sales increased 48%, reaching US\$43,164 million, mainly reflecting higher import costs, as a result of higher volumes of oil, oil products and natural gas and higher Brent and LNG purchase prices. It is worth highlighting the higher share of LNG in our total natural gas purchases following the 188% increase in LNG import volumes to meet higher demand, alongside the 214% increase in acquisition costs.

Selling Expenses

Selling expenses were US\$4,229 million in 2021, a decrease of 13.4% compared to US\$4,884 million in 2020, mainly due to lower freight prices and lower volumes of exports.

General and Administrative Expenses

General and administrative expenses were US\$1,176 million in 2021, an increase of 7.9% compared to US\$1,090 million in 2020, mainly reflecting the enactment of Legislative Decree No. 26/2021, on the date of its publication, which suspended the effects of CGPAR Resolution No. 23/2018, which had established a parity limit for the cost of the health care benefit between state-owned enterprises and employees 50% by us and 50% by the participants). Considering the conditions that we and the labor unions established in the collective agreement 2020-2022, the participation that, as of January 2022, would have been in the proportion of 50% between us and the participants, will remain 60% of the expenses covered by us and the remaining 40% by the participants. As a result of this change, the actuarial liability of the health care plan was remeasured, resulting in an expense of US\$ 58 million presented as General and Administrative Expenses in 2021 as compared to a gain of US\$ 237 million in 2020. This effect was partially compensated by the reduction in the headcount.

Exploration Costs

Exploration costs were US\$687 million in 2021, a 14.4% decrease when compared to US\$803 million in 2020, mainly due to less exploratory costs due to fewer dry wells, partially compensated by higher costs related to geology and geophysics.

Impairment of Assets

We recognized impairment reversals in the amount of US\$3,190 million in 2021, a US\$10,529 million positive variation compared to the impairment losses of US\$7,339 million in 2020.

This positive variation was mainly in oil and gas producing properties in Brazil (a US\$3,373 million impairment reversal in 2021 compared to a US\$7,316 million impairment loss in 2020). This result reflects the revision of the key assumptions of the Strategic Plans in 2021 and 2020, especially the increase in average Brent prices in 2021 and the decrease in average Brent prices, as well as the economic slowdown and reduction on demand for oil and oil products, in 2020.

Other Income and Expenses

Other operating income was US\$653 million in 2021, 34.6% lower than 2020 (US\$998 million), mainly due to:

- higher expenses with pension and medical benefits (a US\$1,467 million expense in 2021 compared to a US\$889 million income in 2020), mainly due to a US\$616 million expense in 2021 relating to the remeasurement of the actuarial liability of the health care plan for retired participants with the suspension of CGPAR Resolution No. 23/2018, compared to a US\$1,808 million income in 2020, which resulted from the remeasurement of the actuarial liability of the health care plan following the approval of the reduction of our participation in the expenses of the plan in the Collective Labor Agreement ("ACT") for 2020-2022;
- lower income from the recovery of taxes (a US\$561 million income in 2021 compared to a US\$1,580 income in 2020), primarily due to the effects of the favorable court decisions in relation to the exclusion of ICMS (VAT tax) from the PIS/COFINS tax base (US\$507 million in 2021 compared to US\$1,516 in 2020);
- expenses resulting from equalization of expenses agreements with partners in production individualization agreements in 2021 as compared to income in 2020 (a US\$74 million expense in 2021 compared to a US\$701 million income in 2020). The income recognized in 2020 was primarily a result of the Agreements for the Equalization of Expenses and Volumes ("AEGV") signed with the Company's E&P consortium partners in the shared deposits of Tupi, Sépia and Atapu on April 30, 2020, which resulted in gains of US\$725 million;
- higher expenses related to legal, administrative and arbitration proceedings (a US\$740 million expense in 2021 compared to a US\$493 million expense in 2020), mainly due to: i) increased provision for losses on civil litigation involving contractual matters; and ii) expenses related to the lawsuit for environmental damage occurred in Santa Catarina – Paraná oil pipeline, due to the approval of the agreement, in October 2021, aiming to terminate the case;
- higher income from agreements related to the assumption of interest in concessions (a US\$363 million income in 2021 compared to a US\$84 million income in 2020), mainly relating to six blocks in the State of Amapá (a US\$287 million income) and Potiguar Basin (a US\$65 million income);
- a US\$99 million reversal of costs related to the decommissioning of returned/abandoned areas in 2021, compared to a US\$342 million expense in 2020, due to the update, in 2021, of the 2022-2026 Strategic Plan assumptions (mainly resulting from higher forecasted Brent prices), and to the sales of concessions in 2021 (resulting in the write-off of the related provisions), compared to the update, in 2020, of the 2021-2025 Strategic Plan assumptions (mainly related to the anticipation of timing the abandonments in Tupi, Marlim Sul, Roncador and Jubarte fields);
- income from the co-participation agreements related to the Búzios concession signed in 2021 (a US\$631 million income in 2021, with no effect in 2020);

- a reversal of provisions related to Voluntary Severance Programs in 2021 (a US\$11 million income in 2021 compared to a US\$1,017 million expense in 2020), due to the higher number of enrollments in 2020 and to the revision in the provisions in 2021; and
- higher income from disposals and write-offs of assets and on remeasurement of investment retained with loss of control (a US\$1,941 million income in 2021 compared to a US\$499 million income in 2020). In 2021, the income primarily relates to the contingent payment to us following the approval by the ANP of the individualization agreement in Bacalhau field (a US\$950 million income) and to the sale of Mataripe Refinery ("RLAM") (a US\$574 million income), while in 2020 the income primarily relates to the sale of our interest in Liquigás Distribuidora S.A. (US\$531 million)

Net Finance Income (Expense)

Net finance expense was US\$10,966 million in 2021, a 13.7% increase when compared to US\$9,630 million in 2020, mainly due to:

- foreign exchange losses of US\$ 2,737 million in 2021, as compared to US\$ 1,363 million losses in 2020 reflecting a 7.3% devaluation of the *real*/US\$ exchange rate in 2021 (2021: R\$ 5.58/US\$, 2020: R\$ 5.20/US\$, 2019: R\$ 4.09/US\$) which applied to a higher average net liability exposure to the US\$ during 2021 than in 2020;
- recoverable taxes inflation indexation income of US\$ 518 million in 2021, as compared to US\$ 1,807 million in 2020, mainly due to lower income from the recovery of taxes related to the exclusion of ICMS tax from the PIS/COFIN tax calculation in 2021 as compared to 2020; and
- the above factors were partially offset by lower interest on finance debt of US\$ 2,870 million in 2021, as compared to US\$ 3,595 million in 2020, due to a decrease in the amount of our debt.

Results in equity-accounted investments

We had a gain in equity-accounted investments of US\$1,607 million in 2021, compared to loss of US\$659 million in 2020. This positive variation was mainly due to the investment in BR Distribuidora, which presented a US\$404 million impairment reversal in 2021, compared to a US\$144 million impairment loss in 2020, and to the increase of the value of our equity in Braskem due to its positive operating results.

Income Taxes

Income tax was an expense of US\$8,239 million in 2021, compared to a benefit of US\$1,174 million in 2020, mainly due to:

- (i) higher net income before income taxes (US\$28,225 million of income in 2021 compared to a US\$226 million loss in 2020)
- (ii) higher post-employment benefits, which is a non-deductible expense (US\$802 million expense in 2021 compared to a US\$ 559 million gain in 2020), mainly due to the remeasurement in the health care and pension plans which occurred in 2021, compared to the non-taxable gain from the health care plan revision that occurred in 2020.

For information regarding discussion of earlier years, please refer to our previous Annual Report and Form 20-F. Our SEC filings are available to the public on the SEC's website at www.sec.gov and on our website at

www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.

Financial Performance by Business Segment

SELECTED FINANCIAL DATA BY REPORTABLE OPERATING SEGMENTS AND FOR CORPORATE AND OTHER BUSINESS

	For the year ended December 31		
	2021 (US\$ million)	2020 (US\$ million)	▲ 21-20 (%)
Exploration and Production			
Sales revenues to third parties ⁽¹⁾⁽²⁾	1,105	871	26.9
Intersegment sales revenues	54,479	33,524	62.5
Total sales revenues⁽²⁾	55,584	34,395	61.6
Cost of sales	(23,673)	(18,098)	30.8
Impairment of assets	3,107	(7,364)	(142.2)
Net income (loss) attributable to our shareholders	23,353	4,475	421.9
Refining, Transportation and Marketing			
Sales revenues to third parties ⁽¹⁾⁽²⁾	73,108	46,917	55.8
Intersegment sales revenues	1,416	865	63.7
Total sales revenues⁽²⁾	74,524	47,782	56.0
Cost of sales	(65,620)	(44,011)	49.1
Impairment of assets	289	164	76.2
Net income (loss) attributable to our shareholders	5,746	111	5,076.6
Gas and Power			
Sales revenues to third parties ⁽¹⁾⁽²⁾	9,487	5,270	80.0
Intersegment sales revenues	2,564	2,455	4.4
Total sales revenues⁽²⁾	12,051	7,725	56.0
Cost of sales	(9,494)	(3,985)	138.2
Impairment of assets	(208)	(697)	(70.2)
Net income (loss) attributable to our shareholders	(206)	821	(125.1)
Corporate and other Businesses			
Sales revenues to third parties ⁽¹⁾⁽²⁾	266	625	(57.4)
Intersegment sales revenues	238	251	(5.2)
Total sales revenues⁽²⁾	504	876	(42.5)
Net income (loss) attributable to our shareholders	(7,308)	(4,670)	(56.5)

(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.

Exploration and Production

Net income attributable to our shareholders in our E&P segment was US\$23,353 million in 2021 compared to US\$4,475 million in 2020, primarily due to:

- higher sales revenues (an increase of US\$21,189 million), primarily due to higher oil prices;
- higher cost of sales (an increase of US\$5,575 million), mainly due to higher royalties and governmental participation expenses reflecting higher oil prices; and
- lower impairment losses (a decrease of US\$10,471 million). As part of its impairment testing process, during 2021 our management increased the Brent short term price assumption established in our 2021 -2025 Strategic Planning and, subsequently, on November 24, 2021, our management concluded and approved its 2022 -2026 Strategic Plan, including the complete update of the economic assumptions (including Brent price assumptions), as well as its project portfolio and estimates of reserve volumes. These updates resulted in the increase of the recoverable amount of a number of Cash Generating Units which led to the reversal of impairment previously recognized. See Note 25 to our audited consolidated financial statements for further information about impairment losses.

Refining, Transportation and Marketing

Net income attributable to our shareholders in our RTM segment was US\$5,746 million in 2021 compared to US\$111 million in 2020, primarily due to:

- higher sales revenues (an increase of US\$26,742 million), primarily due to the increase in international prices and the increase in domestic demand mainly due to the economic recovery after the impact of the Covid-19 pandemic in 2020; partially offset by lower revenues from oil exports
- higher operating income (US\$7,283 million in 2021 compared to US\$779 million in 2020) primarily due to higher positive inventory turnover (sale of inventories formed at lower prices over the last two years, as a result of the increase in Brent prices between 2020 and 2021, from US\$42/bbl to US\$71/bbl);
- lower selling expenses (a decrease of US\$977 million) mainly due to the decrease in shipping expenses;
- lower expenses with our voluntary separation plan that occurred in 2020 (a decrease of US\$324 million);
- lower impairment (a decrease of US\$125 million) mainly due the reversal related to the second unit of Abreu e Lima refinery in 2021;
- higher results from disposal/write-offs of assets primarily due to the gain with the sale of the RLAM refinery on November 30, 2021, of US\$574 million; and
- higher results in equity-accounted investments (an increase of US\$1,378 million, an income of US\$ 941 million in 2021 from a US\$437 million loss in 2020), primarily due to positive operating results in Braskem.

Gas and Power

Despite the strong recovery in natural gas demand, net income attributable to our shareholders in our Gas and Power segment was a loss of US\$206 million in 2021 compared to income of US\$821 million in 2020, primarily due to:

- higher Cost of Sales (an increase of US\$ 5,509 million) mainly due to higher natural gas acquisition costs, especially LNG costs with higher volume imported and higher unit cost due to (i) the maintenance of below average temperatures in the northern hemisphere, (ii) supply restrictions, (iii) lower gas inventories in Europe, and (iv) the heating up of the Chinese economy;
- impairment of UTG Sul (US\$ 61 million) and;
- loss on the sales of oil thermal plants (Arembepe, Bahia 1 and Muricy) of US\$ 79 million.

For information regarding discussion of earlier years, please refer to our previous Annual Report and Form 20-F. Our SEC filings are available to the public on the SEC's website at www.sec.gov and on our website at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.

Liquidity and Capital Resources

We closely monitor liquidity levels in order to effectively meet cash needs from our business operations and financial obligations. We have a conservative approach to the management of our liquidity, which consists mainly of (i) cash and cash equivalents (cash in hand, deposits held at call with banks, money market mutual funds and other short-term highly liquid investments with maturities of three months or less), and (ii) investments in financial assets (treasury bills). Based on the information presented below, we believe our working capital is sufficient for our present requirements.

LIQUIDITY AND CAPITAL RESOURCES

US\$ million	2021	2020
Cash and cash equivalents at the beginning of period	11,725	7,377
Government bonds and time deposits with maturities of more than three months at the beginning of period	659	888
Adjusted Cash and Cash Equivalents at the beginning of period ⁽¹⁾	12,384	8,265
Net cash provided by operating activities	37,791	28,890
Acquisition of PP&E and intangibles assets	(6,325)	(5,874)
Investments in investees	(24)	(942)
Proceeds from disposal of assets – Divestment	4,783	1,997
Financial compensation for the Búzios Co-participation Agreement	2,938	-
Dividends received	781	243
Divestment (Investment) in marketable securities	4	66
Net cash provided by (used in) investing activities	2,157	(4,510)
(=) Net cash provided by operating and investing activities	39,948	24,380
Net change in finance debt	(21,757)	(11,861)
Proceeds from financing	1,885	17,023
Rewards	(23,642)	(28,884)
Repayment of lease liability	(5,827)	(5,880)
Dividends paid to our shareholders	(13,078)	(1,367)
Dividends paid to non-controlling interest	(105)	(84)
Investments by non-controlling interest	(24)	(67)
Net cash used in financing activities	(40,791)	(19,259)
Effect of exchange rate changes on cash and cash equivalents	(402)	(773)
Adjusted Cash and Cash Equivalents at the end of period ⁽¹⁾	11,130	12,384
Government bonds and time deposits with maturities of more than three months at the end of period	(650)	(659)
Cash and cash equivalents at the end of period	10,480	11,725

(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 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 the 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. In addition, this measure is the basis for the distribution of dividends according to our dividend policy.

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 and intangibles assets. Compared to the calculation presented in our annual report on Form 20-F for the year ended December 31, 2020, we excluded "Investments in investees" from the deductions of "Net cash provided by operating activities", in order to align with the definition in the most recent update in our dividend policy which occurred in 2021. In addition, the adjustment in 2020 is only for comparative purposes and does not affect prior dividends.

RECONCILIATION OF FREE CASH FLOW

	US\$ million		R\$ million ⁽¹⁾	
	2021	2020	2021	2020
Net cash provided by operating activities	37,791	28,890	203,126	148,106
(-) Acquisition of PP&E and intangible assets	(6,325)	(5,874)	(34,134)	(29,974)
FREE CASH FLOW	31,466	23,016	168,992	118,132

(1) According to our dividend policy, proposed dividends to shareholders is calculated based on the Free Cash Flow measured in Brazilian *reais*.

The principal uses of funds in the year ended December 31, 2021 were for debt service obligations, including pre-payment of debts in the international banking market, repurchase and redemption of securities in the international capital market and lease payments totaling US\$29,469 million, acquisition of PP&E and intangibles assets in the amount of US\$6,325 million and dividend payments amounting to US\$13,183 million. These funds were principally provided by cash from operating activities of US\$37,791 million, financial compensation for the Búzios co-participation agreement of US\$2,938 million, proceeds from financing of US\$1,885 million and proceeds from divestments of US\$4,783 million.

Source of Funds

In 2021, 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 2021 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 long-term debt from funding sources to prepay expensive loans of shorter maturities.

Cash Flows from Operating Activities

Net cash provided by operating activities was US\$37,791 million in 2021, an increase of 31% from US\$28,890 million in 2020, mainly due to higher oil prices and refining margins, partially compensated by higher working capital and income tax.

Disposal of Assets

We received cash inflow from the sale of assets amounting to US\$4.8 billion, for the year ended December 31, 2021, which represents the prices paid to us on the closing of the completed transactions and the upfront contract signing payments related to certain transactions that have not yet been closed.

Assets	Cash-inflow (US\$ million)
Sale of the remaining interest (37.5%) in BR Distribuidora	2,184
Sale of the entire interest in RLAM	1,811
Sale of the remaining interest (10%) in NTS	277
Others	511
TOTAL	4,783

From January 1, 2022 through February 28, 2022, we have received US\$1,680 million from divestments, primarily related to the receipt of US\$950 million related to the final contingent installment from the sale of exploratory block BM-S-8; the receipt of US\$421 million related to the signing of the sale of the Carmópolis, Norte Capixaba, and Potiguar clusters, as well as the receipt of US\$240 million related to the closing of the sale of Alagoas cluster.

For additional information on divestments, see "Our Business – 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 (a non-GAAP measure representing the sum of short and long-term finance debt and lease liabilities) totaled US\$58,743 million, and the Net Debt (a non-GAAP measure representing Gross Debt less cash and cash equivalents, Brazilian federal government securities and time deposits maturing over three months), totaled US\$47,626 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 2021, proceeds from financing amounted to US\$1,885 million, principally reflecting global notes issued in the international capital market in the amount of US\$1,442 million maturing in 2051.

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.

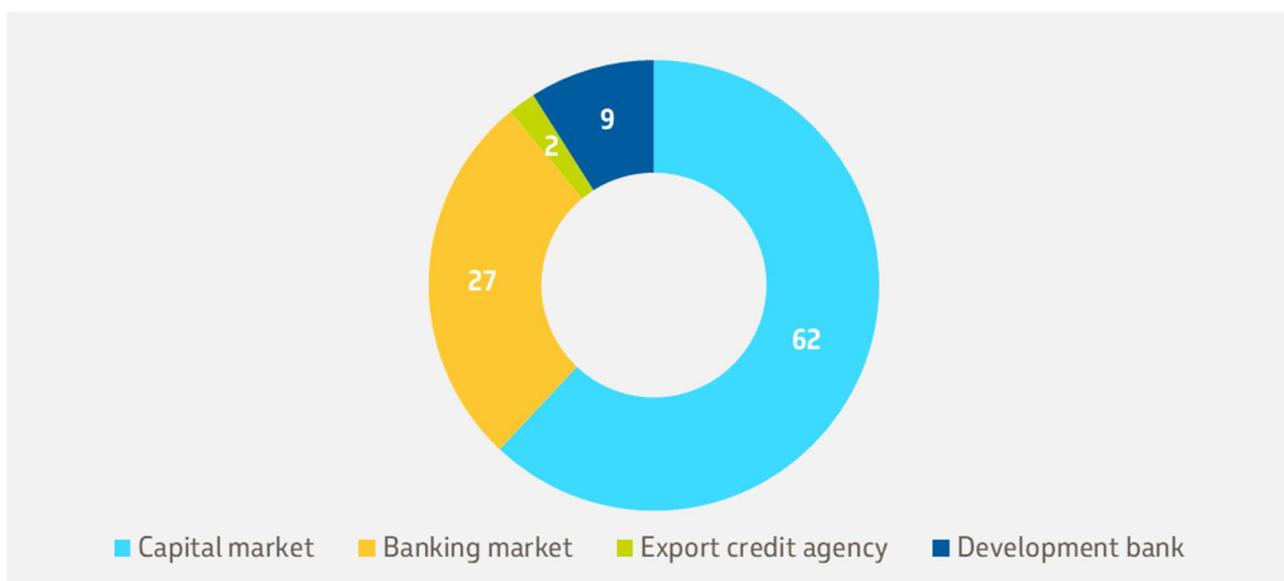
Information on weighted average interest rate and weighted average maturity of our finance debt is presented below:

	2021	2020	2019
Weighted average interest rate (%)	6.2	5.9	5.9
Weighted average maturity (in years)	13.39	11.71	10.79
Leverage (%) ⁽¹⁾	41	47	44

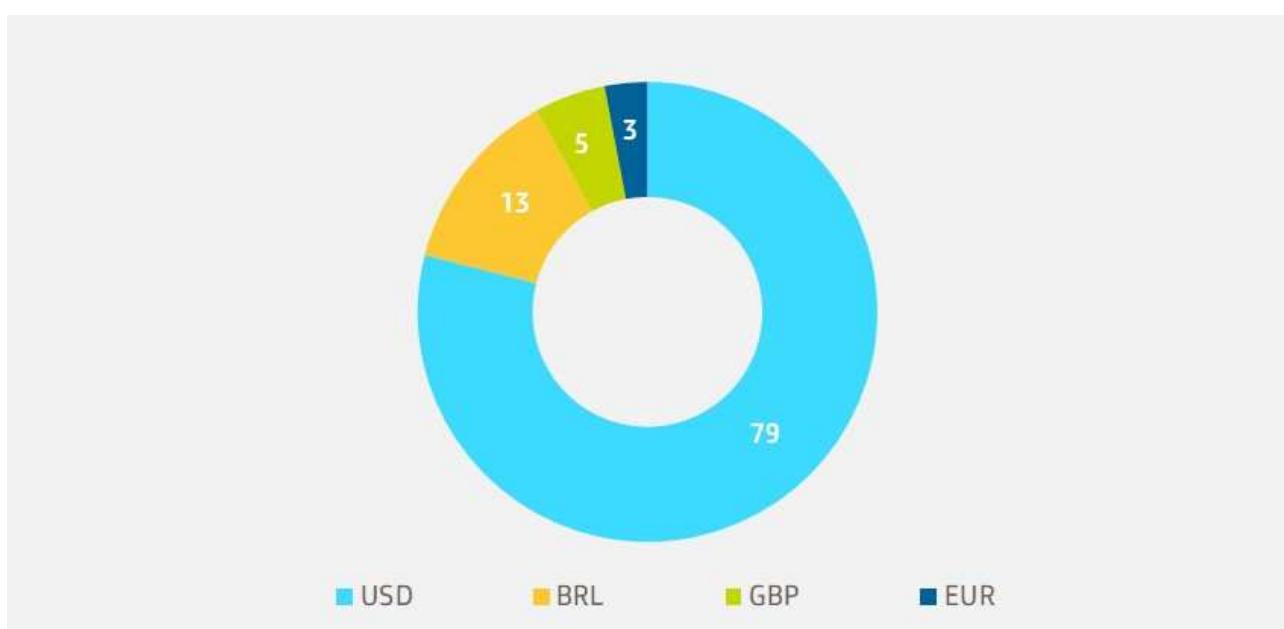
(1) This leverage takes into account market capitalization and it is defined as (Gross Debt – Cash Equivalents) / (Market Capitalization + Gross Debt – Cash Equivalents).

For additional information on Finance Debt amortization, see “ – Liquidity and Capital Resources – Use of Funds – Debt Service Obligations” in this annual report.

DEBT PROFILE PER CATEGORY (%)



DEBT PROFILE PER CURRENCY (%)



As of December 31, 2021, our finance debt due in the short-term, including accrued interest, amounted to US\$3,641 million, compared to US\$4,186 million as of December 31, 2020.

Our outstanding long-term finance debt amounted to US\$32,059 million as of December 31, 2021, compared to US\$49,702 million as of December 31, 2020. This decrease was primarily due to repurchase of global bonds and pre-payment of debt.

See Note 32 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

In 2021, Moody's upgraded our credit rating by one notch, from "Ba2" to "Ba1," one notch below investment grade, with a stable outlook. The agency also upgraded our stand alone rating by one notch, from "Ba2" to "Ba1." With this upgrade we are rated one notch above the Brazilian government. S&P upgraded our stand alone rating to BB+, also one notch below investment grade. There were no changes on our global rating and outlooks in 2021 by S&P and Fitch (BB- / stable and BB- / negative, respectively). There were no changes in stand alone rating by Fitch (BBB).

As of February 28, 2022, there were no changes to our stand-alone credit profile rating or to our global rating.

GLOBAL RATING

	2022 ⁽¹⁾	2021 ⁽²⁾	2020 ⁽²⁾
Standard & Poor's	BB-	BB-	BB-
Moody's	Ba1	Ba1	Ba2
Fitch	BB-	BB-	BB-

(1) As of February 28, 2022.

(2) As of December 31, 2021.

STAND ALONE RATING

	2022 ⁽¹⁾	2021 ⁽²⁾	2020 ⁽²⁾
Standard & Poor's	BB+	BB+	BB
Moody's	Ba1	Ba1	Ba2
Fitch	BBB	BBB	BBB

(1) As of February 28, 2022.

(2) As of December 31, 2021.



Exposure to interest rate and exchange rate risk

The table below provides a summary of information regarding our exposure to interest rate and exchange rate risk in our finance debt for 2021 and 2020, including short-term and long-term debt.

TOTAL FINANCE DEBT⁽¹⁾

	2021 (%)	2020 (%)
Real - denominated		
Fixed rate	7.2	5.1
Floating rate	5.4	10.0
Sub-total	12.6	15.1
U.S. dollar - denominated		
Fixed rate	46.9	46.4
Floating rate	31.9	31.9
Sub-total	78.8	78.3
Other currencies		
Fixed rate	8.6	6.6
Floating rate	0.0	0.0
Sub-total	8.6	6.6
TOTAL	100.0	100.0
Floating rate debt		
Real-denominated	5.4	10.0
Foreign currency-denominated	31.8	31.9
Fixed rate debt		
Real-denominated	7.2	5.1
Foreign currency denominated	55.6	53.0
TOTAL	100.0	100.0
U.S. dollars	78.7	78.3
Euro	3.4	3.1
Gbp	5.2	3.5
Japanese yen	0.0	0.0
Brazilian reais	12.7	15.1
TOTAL	100.0	100.0

(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 preferentially 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 on our debt contracts in order to substitute LIBOR with another reference rate but according to information 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. During 2021, the notional amount was reduced, adjusting the protection to a lower exposure to the Pound Sterling provided by the prepayment of related-party loans in this currency over the course of this period.

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 debentures issuance, 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.

In 2021, no operations were carried out in derivative financial instruments.

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 and Variation Impacts" in this section and Notes 4.8 and 36.3(a) to our audited consolidated financial statements for further information about our cash flow hedge.

See Note 36.3 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, 2021.

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 32, 36.5 and 36.6 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, 2021, the amount of lease liabilities totaled US\$23,043 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, results from co-participation agreements in bid areas and foreign exchange gains or losses on provisions for legal proceedings denominated in foreign currencies.

US\$ million	2021	2020	2019
Net income (loss) from continuing operations	19,986	948	7,803
Net finance income (expense)	10,966	9,630	8,764
Income taxes	8,239	(1,174)	4,200
Depreciation, depletion and amortization	11,695	11,445	14,836
EBITDA	50,886	20,849	35,603
Results in equity-accounted investments	(1,607)	659	(153)
Impairment	(3,190)	7,339	2,848
Reclassification of comprehensive income (loss) due to the disposal of equity-accounted investments	41	43	34
Results on disposal/write-offs of assets and on remeasurement of investment retained with loss of control	(1,941)	(499)	(6,046)
Results from co-participation agreements in bid areas	(631)	-	-
Foreign exchange gains or losses on provisions for legal proceedings	-	-	120
Adjusted EBITDA from continuing operations	43,558	28,391	32,406
Adjusted EBITDA from discontinued operations	-	-	301
Adjusted EBITDA	43,558	28,391	32,707

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 2021 and 2020 of the Net Debt/Adjusted EBITDA ratio measure to the most directly comparable measure derived from IFRS captions, which is, in this case, is the finance debt plus lease liability minus cash and cash equivalents, divided by the net cash provided by operating activities:

US\$ million	2021	2020
Cash and cash equivalents	10,467	11,711
Government securities and time deposits (maturity of more than three months)	650	659
Adjusted Cash and Cash Equivalents	11,117	12,370
Finance debt	35,700	53,888
Lease liability	23,043	21,650
Current and non-current debt—Gross Debt	58,743	75,538
Net Debt	47,626	63,168
Net cash provided by operating activities—OCF	37,791	28,890
Income taxes	8,239	(1,174)
Allowance for credit loss on trade and other receivables	30	(144)
Trade and other receivables, net	2,075	(1)
Inventories	2,334	(724)
Trade payables	(1,073)	(216)
Deferred income taxes, net	(4,058)	1,743
Taxes payable	(4,878)	(2,914)
Others	3,098	2,931
Total Adjusted EBITDA	43,558	28,391
Gross debt net of cash and cash equivalents/OCF ratio	1.26	2.21
Net debt/Adjusted EBITDA ratio	1.09	2.22

Our Net Debt/Adjusted EBITDA ratio computed in U.S. dollar decreased from 2.22 as of December 31, 2020 to 1.09 as of December 31, 2021, reflecting the effects derived by the combination of higher Adjusted EBITDA and lower Net Debt.

Use of Funds

Capital Expenditures

We disbursed a total of US\$8,772 million in 2021 (of which 81% was used in E&P business), a 9% increase when compared to our Capital Expenditures of US\$8,056 million in 2020. In line with our previous 2021-2025 strategic plan, our Capital Expenditures in 2021 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,	2021	2020	2019
Exploration and Production	7,129	6,557	25,080
Refining, Transportation and Marketing	932	947	1,463
Gas and Power	412	352	543
Corporate and Other Businesses	298	200	328
TOTAL	8,772	8,056	27,413

For information on our future Capital Expenditures, see "Strategic Plan" in this annual report.

**EXPLORATION AND PRODUCTION INVESTMENTS:****US\$ 7,129 million**

- Started operation of one new system: FPSO Carioca (Sépia).
- Ramp up of three systems: P-68 (Berbigão-Sururu), Atapu P-70 and FPSO Carioca (Sépia).

**REFINING, TRANSPORTATION AND MARKETING INVESTMENTS:****US\$ 932 million**

- Basic design to allow REPLAN and REVAP to produce 100% S-10 diesel oil and aviation fuel.
- Adjustments at the U-2700 unit at REDUC to produce 4,500 m³/d of diesel 10 ppm of sulfur, aiming to meet market and environmental expectations.
- Investments in scheduled maintenance stoppages. More than 4,000 equipments underwent inspection and maintenance at all our refineries.

**GAS AND POWER INVESTMENTS:****US\$ 412 million**

- Construction and expansion of the capacity of gas pipelines and natural gas processing units to supply the pre-salt pole production in the Santos basin.

Dividends

Our Board of Directors proposed a distribution of dividends in 2021 in the amount of US\$18,541 million. Such dividends were calculated in Brazilian *reais*, according to our dividend policy, in the amount of R\$101,395 representing 60% of our Free Cash Flow, translated to U.S. dollars based on the exchange rate prevailing at the date of approval for each anticipation and on the closing exchange rate for the complementary dividends.

For more information on our dividend policy, see "Shareholder Information – Dividends" in this annual report and Note 34.5 to our audited consolidated financial statements.

Debt Service Obligations

As of December 31, 2021, our debt maturity profile includes, for the next five years, US\$33,560 million in finance debt and lease liability (nominal amounts).

AMORTIZATION PROFILE⁽¹⁾ (US\$ million)



1) Amounts composed by Lease nominal future payments and Finance debt principal.

Finance Debt

In 2021, we repaid several finance debts, in the amount of US\$23,642 million notably: (i) prepayment of banking loans in the domestic and international market totaling US\$6,344 million; (ii) US\$9,840 million to repurchase global bonds previously issued by us in the capital market, with net premium paid to bond holders amounting to US\$1,090 million; and (iii) prepayment of loans with development agencies, in the amount of US\$593 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.

In addition, there are nominal amounts of lease agreements for which the lease term has not commenced, as they relate to assets under construction or not yet available for use. As of December 31, 2021, these agreements amount to US\$79,557 million (US\$67,408 million at December 31, 2020). The increase in the year ended December 31, 2021 corresponds to new contractual commitments, including two floating production units.

For information on changes in the balance of lease liabilities and on leases by class of underlying assets, see Note 33 to our audited consolidated financial statements.

Ability of Subsidiaries to Transfer Funds to the Company

As of the date hereof, we have no knowledge of any legal or economic restrictions on the ability of our subsidiaries to transfer funds to us in the form of cash dividends, loans or advances. As a result, we do not anticipate any impacts on our ability to meet our cash obligations.

Other Information

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.

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.

On March 5, 2022, the Brazilian federal government, through the Ministry of Mines and Energy (MME), issued a formal notice (*ofício*) designating eight individuals as candidates to our Board of Directors. On March 28, 2022, the Brazilian federal government further updated the list of its designated individuals. The eight individuals designated by the Brazilian federal government for election to the Board of Directors are: Luiz Rodolfo Landim Machado (for Chairman of the Board of Directors), Adriano José Pires Rodrigues, Carlos Eduardo Lessa Brandão, Eduardo Karrer, Luiz Henrique Caroli, Márcio Andrade Weber, Ruy Flaks Schneider and Sonia Julia Sulzbeck Villalobos. The election of the Board of Directors will take place at the Annual General Meeting, expected to be held on April 13, 2022. The notice issued on March 28, 2022 also designated Mr. Adriano José Pires Rodrigues for the position of CEO, to be considered by our Board of Directors at a later date following the Annual General Meeting.

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.

As of the date of this annual report, we have the following 11 directors:

Eduardo Bacellar Leal Ferreira

 Born June 2, 1952	 Nationality Brazilian	 Position Chairman of the Board of Directors since January 2019	 Other directorships None
 Current term expires Ordinary General Shareholders' meeting 2022	 Nominated by Controlling Shareholder	 Independent No	 Family Relations None
<p>Business experiences</p> <p>Mr. Leal Ferreira is a Retired Admiral. He was the Commander of the Brazilian Navy (2015- 2019), reaching the Navy's highest level. While holding the positions of Captain of the Ports of Rio de Janeiro (2003-2004) and Director of Ports and Coasts (2010-2012), he had the opportunity to deepen his connections with offshore activities related to the oil and gas industry. He was also the Commanding Officer of both the Brazilian Naval Academy (2007) and the National War College (2013-2015) and Commander-in-Chief of the Brazilian Fleet (2012-2013). Abroad, he served in Chile (1992) and in the United States of America as an instructor at the U.S. Naval Academy in Annapolis (1987-1989).</p>			
<p>Education</p> <p>In addition to the Brazilian Naval Academy, Mr. Leal Ferreira took postgraduate courses at the Naval War Colleges of Brazil and of Chile, with a Professional Doctorate in maritime policy and strategy.</p>			

Joaquim Silva e Luna

 Born December 29, 1949	 Nationality Brazilian	 Position Member of the Board of Directors since April 2021	 Other directorships None
 Current term expires Ordinary General Shareholders' meeting 2022	 Nominated by Controlling Shareholder	 Independent No	 Family Relations None
<p>Business experiences</p> <p>Mr. Silva e Luna was formerly the Brazilian Chief Executive Officer of Itaipu Binacional. He was also a Reserve Army General and Minister of Defense from February 2018 until January 2019, reaching the organization's highest level. Throughout his career, Mr. Silva e Luna held the following positions: Commander of several construction engineering companies in the Amazon; instructor at the Officer Training School and at the Army Command and General Staff School; Head of the Intelligence Sector in the Land Operations Command and the Press Section of the Army's Social Communication Center; Commander of the 6th Construction Engineering Battalion; Commander of the 16th Jungle Infantry Brigade; Director of Assets; Chief of Staff of the Army Commander; Chief of Staff of the Army; Staff Secretary; Education, Health and Sports of the Ministry of Defense; General Secretary of the Ministry of Defense; Minister of Defense; and Chief Executive Officer of Itaipu Binacional. He was the first military officer to hold the positions of General Secretary of the Ministry of Defense and the Ministry of Defense. While abroad, he was a member of the Brazilian Military Instruction Mission and Engineering Advisor as an instructor at undergraduate, graduate, and doctoral schools in Paraguay, and Defense Attaché for the Navy, Army and Air Force in Israel. He also served as a Board Member of Amazônia Azul Tecnologia de Defesa S.A. (AMAZUL) for three years.</p>			
<p>Education</p> <p>Mr. Silva e Luna holds postgraduate degree in projects and systems analysis at the Universidade de Brasília, postgraduate degree in army policy, strategy and senior management, a master's degree in military operations, and a PhD in military sciences.</p>			

Cynthia Santana Silveira

**Born**

February 13, 1960

**Nationality**

Brazilian

**Position**Member of the
Board of Directors
since April 2021**Other directorships**Chief Executive Officer of
Transportadora Brasileira Gasoduto
Bolívia-Brasil S.A. (TBG)**Current term expires**Ordinary General
Shareholders'
meeting 2022**Nominated by**Controlling
Shareholder**Independent**

No

**Family Relations**

None

**Business experiences**

Mrs. Cynthia Santana Silveira developed her professional career in the oil and gas industry, where she has been working for over 30 years, occupying various executive and leadership positions. Since December 2021, Mrs. Silveira has been the CEO of Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG). She also served as an Executive Director of Gas and Electricity at Total E&P do Brasil (2004-2015) and an elected Executive Director of the Brazilian Institute of Oil, Gas and Biofuels (IBP) (2011-2015). From 2015 to January 2021, she worked as an independent consultant at EXERGIA Consultoria e Projetos. Ms. Cynthia Silveira has relevant experience as Board Member and Member of Committees of companies and institutions in the oil and gas sector. She has served as a member of the Board of Directors of Transportadora Associada de Gás (TAG) (2019-2020), Transportadora Brasileira Gasoduto Bolívia-Brasil (TBG) (2002-2015) and Transportadora Sul Brasileira de Gás (TSB) (2005-2015). In addition, she was a member of the Executive Committee of the International Gas Union (IGU) (2012-2018), Chairman of the International Gas Research Conference 2017 (IGRC) and member of the Natural Gas Coordinating Committee of the Brazilian Petroleum Institute (IBP) (2011-2015). Since April 2021, Mrs. Cynthia Santana Silveira has been a member of our Board of Directors, actively participating in the Advisory Committees as a member of the People Committee and the Investment Committee. Mrs. Cynthia Santana was a member of our Audit Committee from September 2021 to November 2021.

**Education**

Mrs. Cynthia Santana Silveira is an electrical engineer graduated from the Universidade do Estado do Rio de Janeiro (UERJ), with master's degree in mechanical engineering from Universidade Federal do Rio de Janeiro (COPPE/UFRJ) and in gas engineering from École des Mines de Paris.

Marcelo Gasparino da Silva

 Born	February 13, 1971	 Nationality	Brazilian	 Position	Member of the Board of Directors since August 2021	 Other directorships	Chairman of the Board of Directors of Eternit, Member of the Board of Directors of Vale S.A. and Member of the Board of Directors of Companhia Energética de Minas Gerais (CEMIG)
 Current term expires	Ordinary General Shareholders' meeting 2022	 Nominated by	Minority Shareholders	 Independent	Yes	 Family Relations	None

**Business experiences**

Mr. Marcelo Gasparino da Silva has experience the following sectors: mining and steel, oil & gas, petrochemical, logistics, generation, transmission and distribution of energy, distribution of natural gas, transformation of steel, basic industry, civil construction, roofing for civil construction (including photovoltaic generation, storage and basic sanitation acquired skills, abilities, and knowledge). These experiences allow Mr. Gasparino da Silva to effectively contribute to a diverse array of subjects and strategies that the boards on which he participates regularly encounter, such as turnaround, ESG, capital structure, mergers & acquisitions, sale of non-core assets and, crucially, financial restructuring of companies in crisis, a category which includes judicial reorganization, executive succession, highly complex legal issues and leadership's role in coping with global crises such as the Covid-19 pandemic. He is a Board Member certified by the Brazilian Institute of Corporate Governance (IBGC) since 2010. He started his executive career as Legal and Institutional Director of Celesc (2007-2009). He was Chairman of the Board of Directors of Usiminas during the height of the 2015-2016 economic crisis and during a period of significant Brazilian corporate conflict, with Usiminas's shares reaching as low as R\$0.85 in January 2016 and exceeding R\$4.00 in April, following action by their Council. In April 2017, he was elected President of the Board of Directors of Eternit to lead the company turnaround after the election of a new executive board. However, in the same year, Eternit suffered a major setback after the use of Chrysotile Asbestos was banned in Brazil, resulting in a Judicial Reorganization Process in 2018. In parallel to leading Eternit's board through a tumultuous time, Mr. Gasparino da Silva helped Eternit search for new business in the photovoltaic sector, ultimately launching Eternit Solar and Tégula Solar, photovoltaic roof tile initiatives, allowing Eternit to include technology and innovation in its product portfolio. He was member of the Boards of Directors of Bradespar (2015-16), Battistella (2016-17), Casan (2019), Celesc (2011-14 and 2018-19), Eletrobras (2012-14 and 2016), Eletropaulo (2016-18), Gasmig (2020-21), Kepler Weber (2017-20) Tecnisa (2012-14) and Usiminas (2012-16). He was a fiscal advisor to AES Tietê (2013-14), Bradespar (2014-15) and Braskem (2018-19).

**Education**

Mr. Marcelo Gasparino is a lawyer graduated from the Universidade Federal de Santa Catarina (UFSC) and received a specialist certification in Corporate Tax Administration from the UFSC. He has also completed executive trainings in mergers and acquisitions at London Business School, and CEO Program for Senior Executives at Fundação Getúlio Vargas (FGV). Additionally, he is a Professor at Fundação ENA - School of Government, teaching certification courses for administrators of state-owned companies and public-owned companies.

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 Pontifícia Universidade Católica do Rio de Janeiro (PUC-RJ) 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 over 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 worked as a commodities stock analyst and an investment banker. Since 1995, he has been named as one of the leading analysts in Brazil according to several surveys by Institutional Investor Magazine. He was ranked "#1 Brazilian 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-RJ), in french studies from Nancy University II and an OPM (Owner/President Management) from Harvard Business School.

Márcio Andrade Weber

 Born	December 19, 1953	 Nationality	Brazilian	 Position	Member of the Board of Directors since April 2021	 Other directorships	None
 Current term expires	Ordinary General Shareholders' meeting 2022	 Nominated by	Controlling Shareholder	 Independent	Yes	 Family Relations	None



Business experiences

Mr. Márcio Andrade Weber joined Petrobras in 1976, where he continued his work for 16 years. During that time Mr. Weber became one of the pioneers in the development of the Campos Basin and held several managerial and directive positions such as in international activities in Trinidad (1980-1981), Libya (1984-1986) and Norway (1987-1990). As a member of the Board of Petrobras International Services (Braspetro) (1991-1992) and Director of Petroserv S.A. (2007-2020), Mr. Weber developed the Company's participation in E&P activities, support navigation and drilling rigs for deepwater. As CEO of BOS Navegação (a joint venture between Petroserv and two foreign companies) he was responsible for the construction of four support tugboats in Brazilian shipyards. In parallel, as Director of Petroserv, he participated in the construction and operation of four deepwater drilling rigs, which are contracted by clients such as Shell and ENI (Indonesia). He has also worked as an advisor for PMI group, which operates these units (2020-2021).



Education

Mr. Weber holds a degree in civil engineer from the Universidade Federal do Rio Grande do Sul (UFRGS) (1975) and specialized in petroleum engineering.

Murilo Marroquim de Souza

 Born	June 4, 1948	 Nationality	Brazilian	 Position	Member of the Board of Directors since April 2021	 Other directorships	None
 Current term expires	Ordinary General Shareholders' meeting 2022	 Nominated by	Controlling Shareholder	 Independent	Yes	 Family Relations	None



Business experiences

Mr. Murilo Marroquim de Souza has been working in the oil industry for 50 years in more than 20 countries in America, Europe, Africa, and Asia. He worked at Petrobras from 1971 to 1994, where he held several managerial positions in the exploration and production area, and was Director of Brasoil UK (1989-1993), in London, with exploration activities in the North Sea and other basins. He was General Manager for IBM's Oil Industry Solutions Unit in Latin America (1994-1998). He also worked as a consultant, working for ANP in several projects (1998-1999), and in Ipiranga as Advisor for Exploration and Production (1999-2001). From 2001 to 2011 he was CEO of Devon Energy do Brasil (Ocean Energy) and since 2011 he has been CEO of Visla Consultoria de Petróleo, a consulting firm focused on special projects for the energy industry.



Education

Mr. Marroquim holds a degree in geology from the Universidade Federal de Pernambuco (UFPE) and a master's degree in geophysics from the University of Houston, Texas, in the United States of America.

Rodrigo de Mesquita Pereira

 Born	October 20, 1964	 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	Preferred Shareholders	 Independent	Yes	 Family Relations	None



Business experiences

Mr. Rodrigo Mesquita is a partner at Alves Ferreira & Mesquita Sociedade de Advogados. Mr. Mesquita was a member of the Public Prosecution Service of the State of São Paulo (1991-2001), a member of the Fiscal Council of Companhia Energética de Minas Gerais – CEMIG (2016-2020) and an alternate member of our Fiscal Council (2018-2019).



Education

Mr. Mesquita is a lawyer with a bachelor's degree in law from Universidade de São Paulo (USP) (1988) and an extension degree in "Diffuse and Collective Interests" from the Pontifícia Universidade Católica de São Paulo (PUC-SP). He also holds a postgraduate degree in business management from Fundação Getúlio Vargas (FGV).

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	No	 Family Relations	None
Business experiences							
Mrs. Buzanelli joined Petrobras in 1987 in the Geophysics department. She is currently employed in the Deepwater Exploration Department.							
Education							
Mrs. Buzanelli holds a degree in engineering geology from the Universidade Federal de Ouro Preto (UFOP), and a master's degree in geosciences from the Instituto Nacional de Pesquisas Espaciais (INPE).							

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 Centrais Elétricas Brasileiras S.A. – ELETROBRAS, Chairman of the Board of Directors of the Liga da Reserva Naval do Brasil and Board Member at the 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 is Navy Reserve Officer. He founded the Department of Industrial Engineering at Pontifícia Universidade Católica do Rio de Janeiro (PUC/RJ), becoming its first Director (1966-1968) and establishing the first master's program in Industrial Engineering in Brazil. He is a lecturer in Brazil and abroad and has published several articles. He has extensive experience, both as an executive and as a member of the Boards of Directors and Fiscal Council of large companies, including Xerox do Brasil SA (1966-1970), Banco Brascan de Investimento SA and Banco de Montreal SA - Montreal Bank (1970-1998), Grupo Multiplan (1988-1991) and INB Indústrias Nucleares do Brasil (2007-2012). He served as a member of the Central Bank's Advisory Council for capital markets, advising on the preparation of the foreign debt conversion program. He also created the first multi-sponsored pension fund and introduced the concept of Defined Contribution Funds in Brazil. He has been a member of the Board of Directors of Eletrobras since 2019 and of Petrobras since 2020.							
Education							
Mr. Schneider holds a degree in industrial mechanical and production engineer from the of Pontifícia Universidade Católica do Rio de Janeiro (PUC/RJ) in 1963 and master's degree in engineering-economy from Stanford University in 1965.							

 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 Centrais Elétricas Brasileiras S.A. – ELETROBRAS, Chairman of the Board of Directors of the Liga da Reserva Naval do Brasil and Board Member at the 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 is Navy Reserve Officer. He founded the Department of Industrial Engineering at Pontifícia Universidade Católica do Rio de Janeiro (PUC/RJ), becoming its first Director (1966-1968) and establishing the first master's program in Industrial Engineering in Brazil. He is a lecturer in Brazil and abroad and has published several articles. He has extensive experience, both as an executive and as a member of the Boards of Directors and Fiscal Council of large companies, including Xerox do Brasil SA (1966-1970), Banco Brascan de Investimento SA and Banco de Montreal SA - Montreal Bank (1970-1998), Grupo Multiplan (1988-1991) and INB Indústrias Nucleares do Brasil (2007-2012). He served as a member of the Central Bank's Advisory Council for capital markets, advising on the preparation of the foreign debt conversion program. He also created the first multi-sponsored pension fund and introduced the concept of Defined Contribution Funds in Brazil. He has been a member of the Board of Directors of Eletrobras since 2019 and of Petrobras since 2020.							
Education							
Mr. Schneider holds a degree in industrial mechanical and production engineer from the of Pontifícia Universidade Católica do Rio de Janeiro (PUC/RJ) in 1963 and master's degree in engineering-economy from Stanford University in 1965.							

Sonia Julia Sulzbeck Villalobos**Born**
June 6, 1963**Nationality**
Brazilian**Position**
Member of the
Board of Directors
since April 2021**Other directorships**
Member of the Board of
Directors of Telefônica do
Brasil and Member of the
Board of Directors of
LATAM Airlines Group S.A.**Current term expires**
Ordinary General
Shareholders'
meeting 2022**Nominated by**
Controlling
Shareholder**Independent**
Yes**Family Relations**
None**Business experiences**

Mrs. Villalobos has more than 30 years of experience in the Brazilian stock market and, in 1994, became the first person from South America to receive the CFA charter. Mrs. Villalobos worked as an investment analyst from 1985 to 1987 at Equipe DTVM, and from 1987 to 1989 at Banco Iochpe. From 1989 to 1996, she worked at Banco Garantia as the head of the investment analysis department, where she was elected best analyst in Brazil by Institutional Investor Magazine in 1992, 1993 and 1994. She worked for Bassini, Playfair & Associates from 1996 to 2002 and was responsible for private equity in Brazil, Chile and Argentina. From 2005 to 2011, she worked for Larrain Vial as an asset manager. From 2012 to 2016, Mrs. Villalobos worked as a founding partner and equity fund manager in Latin America for Lanin Partners. Since 2016, she has been a professor at Insper for post-graduate students in disciplines related to asset management and financial statement analysis. Mrs. Villalobos has been a member of the Board of Directors of Telefônica do Brasil since 2016 and of LATAM Airlines Group S.A. since 2018. She has also served as member of the Board of Directors between 1996 and 2002 for TAM Linhas Aéreas, Método Engenharia (Brasil), TricolorPinturas e Fanaloza/Briggs (Chile), Milkaut and Banco Hipotecario (Argentina). She was a member of our Board of Directors from 2018 to 2020 and was reelected in 2021.

**Education**

Mrs. Villalobos holds a bachelor's degree in public administration and a master's degree in business administration with a finance emphasis, both from the São Paulo School of Business Administration (FGV - EAESP).

Fiscal Council

We have a permanent Fiscal Council composed of up to five members, which is independent of our management and independent registered accounting firm. 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.

On March 5, 2022, the Brazilian federal government, through the Ministry of Mines and Energy (MME), issued a formal notice (ofício) designating four individuals as candidates to our Fiscal Council and the National Treasury Secretariat of the Ministry of Economy issued a formal notice with two designations. The four individuals designated by the Brazilian federal government for election to our Fiscal Council are: Agnes Maria de Aragão da Costa (Main), Marisete Fátima Dadald Pereira (Alternate), Sérgio Henrique Lopes de Sousa (Main) and Alan Sampaio Santos (Alternate). The two individuals designated by the National Treasury for election to our Fiscal Council are: Janete Duarte Mol (Main) and Otávio Ladeira de Medeiros (Alternate). The designated candidates will be considered for our Fiscal Council at the Annual General Meeting, expected to be held on April 13, 2022.

CURRENT MEMBERS OF OUR FISCAL COUNCIL

Members of our Fiscal Council	Year of first appointment	Elected/appointed by
Agnes Maria de Aragão da Costa (Chairman)	2020	Brazilian federal government
Sérgio Henrique Lopes de Sousa	2020	Brazilian federal government
Jeferson Luís Bittencourt	2021	Brazilian federal government/Ministry of Economy
Patrícia Valente Stierli	2021	Minority shareholder
Michele da Silva Gonsales Torres	2021	Preferred shareholder

Alternate members of our Fiscal Council

Jairez Elói de Sousa Paulista	2020	Brazilian federal government
Alan Sampaio Santos	2020	Brazilian federal government
Robert Juenemann	2021	Minority shareholder
Antonio Emilio Bastos Aguiar Freire	2021	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 Regiment of Board of Directors. According to the Internal Regiment 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 nine executive officers:

Joaquim Silva e Luna

**Born**

December 29, 1949

**Nationality**

Brazilian

**Position**Chief Executive Officer (CEO)
since April 2021**Family Relations**

None

**Current term expires**

April 2023

**Business experiences**

Mr. Silva e Luna was the Brazilian Chief Executive Officer of Itaipu Binacional. He is a Reserve Army General and was the Minister of Defense from February 2018 until January 2019, reaching the organization's highest level. Throughout his career, Mr. Silva e Luna held the following positions: Commander of several construction engineering companies in the Amazon; instructor at the Officer Training School and at the Army Command and General Staff School; Head of the Intelligence Sector in the Land Operations Command and the Press Section of the Army's Social Communication Center; Commander of the 6th Construction Engineering Battalion; Commander of the 16th Jungle Infantry Brigade; Director of Assets; Chief of Staff of the Army Commander; Chief of Staff of the Army; Staff Secretary; Education, Health and Sports of the Ministry of Defense; General Secretary of the Ministry of Defense; Minister of Defense; and Chief Executive Officer of Itaipu Binacional. He was the first military officer to hold the positions of General Secretary of the Ministry of Defense and Ministry of Defense. While abroad, he was a member of the Brazilian Military Instruction Mission and Engineering Advisor in the Republic of Paraguay as an instructor at undergraduate, graduate, and doctoral schools, and Defense Attaché for the Navy, Army and Air Force in the State of Israel. He also served as a Board Member of Amazônia Azul Tecnologia de Defesa S.A. (AMAZUL) for three years.

**Education**

Mr. Silva e Luna holds postgraduate degree in projects and systems analysis at the Universidade de Brasília, postgraduate degree in army policy, strategy and senior management, a master's degree in military operations, and a PhD in military sciences.

Cláudio Rogério Linassi Mastella

 Born	December 17, 1962	 Nationality	Brazilian	 Position	Chief Trading & Logistics Executive Officer since April 2021	 Family Relations	None
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 Current term expires	April 2023
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**Business experience**

Mr. Mastella has 34 years of professional experience at Petrobras, specifically the Commercialization, Refining, and Logistics departments. He served as a Board Member of Logum Logística S.A. at Transpetro, our group companies. He was Alternate Director of Petrobras Argentina S.A. and Member of the Strategy and Finance Committee of Transpetro. He has been serving as the Deputy Chairman of the Brazilian Downstream Association of the Instituto Brasileiro de Petróleo, Gás e Biocombustíveis (IBP) since 2020.

**Education**

Mr. Mastella holds a degree in chemical engineering from the Universidade Federal do Rio Grande do Sul (UFRGS), an Executive MBA from IBMEC, a graduate degree in management from the Fundação Dom Cabral, and attended development programs abroad such as: Executive Development Program – Northwestern Kellogg and Managing Supply Chains for Global Competitiveness – Stanford GSB.

Fernando Assumpção Borges

 Born	May 6, 1960	 Nationality	Brazilian	 Position	Chief Exploration and Production Executive Officer since April 2021	 Family Relations	None
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 Current term expires	April 2023
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**Business experience**

Mr. Borges has 38 years of professional experience at Petrobras, having held several managerial roles in the Exploration and Production field. Mr. Borges also served as an Executive Manager at our company, having previously held the Executive Management of Libra from April 2016 to September 2019 and the Executive Management of External Relations from September 2019 to April 2021. He held the position of Director at the Instituto Brasileiro de Petróleo, Gás e Biocombustíveis (IBP) from April 2016 to March 2020 and, since April 2016, after being nominated by us, Mr. Borges has served as Director of the Associação Brasileira de Empresas de Exploração e Produção de Petróleo e Gás (ABEP).

**Education**

Mr. Borges holds a degree in civil engineering from the Universidade Federal de Uberlândia, an Executive MBA from Universidade Federal do Rio de Janeiro (COPPEAD/UFRJ), and attended the Advanced Management Program at Institut Européen D'Administration des Affaires (INSEAD), in France.

**João Henrique Rittershausen**

Born October 24, 1964 **Nationality** Brazilian **Position** Chief Production Development Executive Officer since April 2021 **Family Relations** None

Current term expires
April 2023

Business experience

Mr. Rittershausen has worked at Petrobras for 34 years, having held several managerial roles in the E&P and Supplies segment. Mr. Rittershausen has served as an Executive Manager at our company since November 2017. Initially, he held an Executive Management position in Surface Systems, and, in November 2018, he became the Executive Manager of Surface, Refining, and Gas and Energy Systems, a department responsible for building our company's new assets in the areas of E&P and RGN.

Education

Mr. Rittershausen holds a degree in electrical engineering from the Universidade Federal de Minas Gerais (UFMG), and in petroleum engineering from Petrobras. In addition, he holds an MBA in business management from Universidade Federal do Rio de Janeiro (COPPEAD/UFRJ) and from the Advanced Management Program of Institut Européen D'Administration des Affaires (INSEAD), in France.

Juliano de Carvalho Dantas

Born September 1, 1976 **Nationality** Brazilian **Position** Chief Digital Transformation and Innovation Executive Officer since January 2022 **Family Relations** None

Current term expires
April 2023

Business experience

Mr. Dantas has 19 years of professional experience at Petrobras, specifically in upstream including Wells Construction, Artificial lift & Flow Assurance and Offshore Asset Management as well as in key corporate functions in Human Resources and Procurement Strategy. From November 2019 to December 2021, Mr. Dantas was responsible for the Petrobras R&D, as the Executive Manager of the Research, Development and Innovation Center (CENPES).

Education

Mr. Dantas studied mechanical engineering at Universidade Federal do Rio Grande do Norte (UFRN), has a postgraduate degree in project management from Fundação Getúlio Vargas (FGV), completed the Advanced Management Program (AMP) at Institut Européen D'Administration des Affaires (INSEAD) and has a master of science degree in management (Sloan Fellow) from Stanford Business School (Graduate School of Business).

Rafael Chaves Santos Born
July 3, 1974 Nationality
Brazilian Position
Chief Sustainability & Institutional Relations Executive Officer since December 2021 Family Relations
None Current term expires
April 2023**Business experience**

Mr. Santos joined Petrobras in January 2019 and since then he has contributed extensively to the company's strategic repositioning. He represented Petrobras as the head of strategy, as Chairman of the Board of Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG) and Transpetro; and as a Board member of Oil and Gas Climate Initiative (OGCI). Previously, he worked for the Banco Central do Brasil, for Vale International, for ENEVA, the largest private operator of natural gas in Brazil, and for EPGE, the economy school of Fundação Getúlio Vargas (FGV).

**Education**

Mr. Santos holds a civil engineering degree from the Universidade Estadual do Rio de Janeiro (UERJ). He also obtained a master's degree in finances from the Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio) and a PhD in economics from Fundação Getúlio Vargas (FGV).

Rodrigo Araujo Alves Born
July 10, 1985 Nationality
Brazilian Position
Chief Financial & Investor Relations Executive Officer (Chief Financial Officer – CFO / Chief Investor Relations Officer – CIRO) since April 2021 Family Relations
None Current term expires
April 2023**Business experience**

Mr. Alves has worked at Petrobras since 2007, with extensive experience in the finance sector, occupying the position of Chief Accounting and Tax Officer from 2017 to April 2021. He was Chairman of the Fiscal Council of TBG and member of the Fiscal Council of other companies of our group - Strutura Asfaltos and Élica Mangue Seco. He was also a member of an advisory group of the International Accounting Standards Board (IASB) from July 2018 to September 2021 and is currently a member of the Board of Directors of the Associação Brasileira das Companhias Abertas (ABRASCA). He has received several awards, most notably the Anefac Merit Award for professional of the year in the tax category in 2020, the Confeb award for tax executive of the year for basic industries in 2018 and the Anefac Transparency Trophy in 2019 and 2020, which is awarded to the company with the most transparent Financial Statements in Brazil.

**Education**

Mr. Alves holds a bachelor's degree in business administration from the Universidade Federal de Minas Gerais and a bachelor's in accounting from Faculdade Moraes Júnior Mackenzie Rio, an MBA in economic and financial management from the Fundação Getúlio Vargas, and an executive master's degree in finance (with honors) from HEC Paris. He is a Certified Public Accountant (CPA) in the State of Washington, United States; he holds a COSO Internal Control Certificate from the American Institute of Certified Public Accountants (AICPA) and is Certified in IFRS (CertIFR) by the Association of Chartered Certified Accountants (ACCA). He also took courses in management and finances at INSEAD; Chicago Booth; Singularity University; at the Fundação Dom Cabral; the CFA Institute, and at MDT International.

Rodrigo Costa Lima e Silva**Born**
April 17, 1975**Nationality**
Brazilian**Position**
Chief Refining and Natural
Gas Executive Officer since
April 2021**Family Relations**
None**Current term expires**
April 2023**Business experience**

Mr Silva joined Petrobras in 2005, having held several managerial roles in the Exploration & Production, Gas & Power, and Strategy areas, including the role of Executive Gas and Energy Manager between June 2019 and January 2021. Previously, 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 for some our subsidiaries.

**Education**

Mr. Silva holds a degree in business administration from Universidade Católica de Salvador. He also holds a master's degree in business administration from IBMEC, as well as a MBA in corporate finance from Fundação Getúlio Vargas.

Salvador Dahan**Born**
July 19, 1977**Nationality**
Brazilian**Position**
Chief Governance and
Compliance Executive Officer
since May 2021**Family Relations**
None**Current term expires**
April 2023**Business experience**

Mr. Dahan has 22 years of experience in the Compliance, Risk and Governance areas. From 2005 to 2007, he was the LATAM Risk and Investigation Manager at Procter & Gamble. In 2007, he was invited to work on structuring the Compliance and Corporate Security areas of the Gerdau Group, where he held the position of General Manager until 2016. In early 2017, he joined Nissan Motors to act as Chief Governance, Risk, Compliance and Audit Officer for Latin American operations, structuring processes and policies and, in 2019, he was invited to work in Japan as Nissan's General Manager.

**Education**

Mr. Dahan holds a law degree from Universidade Mackenzie, with an MBA in business security management from FECAP and a postgraduate degree in business and community leadership from INSPER/SP.

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, 2021, the aggregate amount of compensation we paid to all members of our Board of Directors and our Board of Executive Officers was US\$6.1 million. As of December 31, 2021 we had nine 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.

	2021		
	Board of Executive Officers	Board of Directors	Fiscal Council
Average number of members in the period	9.00	10.58	5.17
Average number of paid members in the period	9.00	4.5	5.17
Value of maximum compensation (US\$)	562,252.58	32,374,18	32,374,18
Value of minimum compensation (US\$) ⁽¹⁾	555,796.58	32,374,18	32,374,18
Average value of compensation (US\$) ⁽²⁾	723,823.67 ⁽³⁾	31,555.30 ⁽⁴⁾	30,507.33 ⁽⁴⁾

(1) The value of the minimum individual annual compensation was determined after the exclusion of all members who have held the position for less than 12 months.

- (2) The average value of compensation corresponds to the total value of the annual compensation paid divided by the average number of paid members in the period.
- (3) The calculation takes into account the values related to the termination of the position (gardening leave) and payment of the deferred installments of Variable Remuneration referring to former members of the Board of Executive Officers who left the Company. Consequently, the average value was higher than the value of the maximum compensation.
- (4) The paid positions were not fully occupied during the 12 months of the year. Consequently, the average value was lower than the value of the minimum individual compensation.

For further information regarding compensation of our employees and officers, see Notes 17 and 37 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 us or any of our subsidiaries providing for benefits upon termination of employment. We have a people committee ("COPE") in the form of an advisory committee.

For information on our advisory committee, see "Statutory Board Committees" below.

Share Ownership

As of December 31, 2021, 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	-	-	-
Preferred shares	4,264	63,213	400

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 with respect to the definition of our strategic guidelines, the strategic plan, the annual business plan, among other strategic matters and financial issues. The committee also assists our Board of Directors in evaluating the structure and conditions of investment and divestment transactions, including new business opportunities, mergers, consolidations, and spin-offs in which we are involved, and which are within the responsibility of the Board of Directors. In addition, the committee provides advice to our Board of Directors on analyzing our annual financing program.
- **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, related to the HSE and sustainability matters, suggesting actions when necessary.
- **People Committee:** responsible for assisting our Board of Directors in aspects regarding the management of senior level human assets, including, but not limited to: compensation (fixed and variable), appointments and succession policies as well as the selection and eligibility processes. The People Committee stands in compliance with Brazilian Law No. 13,303/12 and Decree No. 8,945/16, acting as an eligibility committee for assisting shareholders to nominate members to the Board of Directors and Fiscal Council and overseeing the implementation of the required background checks on integrity and compliance regarding of the Board of Directors, Fiscal Council and Executive Officers nominees, as well as external members of the Board of Directors advisory committees, having a deliberative role in these cases. The committee advises our Board of Directors on the possible application of penalties for the Executive Officers and members of the Board of Directors and its Statutory Advisory Committees and acts as our last resource when our Integrity Committee does not reach a unanimous decision in a disciplinary procedure. The committee also monitors image and reputation surveys, recommending actions when necessary.
- **Minority Committee:** responsible for advising our Board of Directors on transactions with related parties involving, 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. The committee is responsible for the companies of the Petrobras Conglomerate that do not have internal audit committees. In addition, the committee provides advice to our Board of Directors regarding guidelines for companies of the Petrobras Conglomerate in matters provided in its bylaws.

SUMMARY OF THE COMPOSITION OF OUR STATUTORY ADVISORY COMMITTEES, AS OF THE DATE OF THIS ANNUAL REPORT

Members	Committees				
	Investment	Audit	Health, Safety, and Environment	People	Minority
Ana Silvia Corso Matte				●	
Carlo Linkevieu Pereira				●	
Cynthia Santana Silveira	●			●	
Durval José Soledade Santos					●
Edson Chil Nobre	●				
Evely Forjaz Loureiro			●		
Marcelo Gasparino da Silva	●				●
Marcelo Mesquita de Siqueira Filho					● ●
Marcio Andrade Weber		●		●	
Murilo Marroquim de Souza	●		●		
Rodrigo de Mesquita Pereira	●	●			●
Rosangela Buzanelli Torres			●		
Ruy Flaks Schneider				●	●
Sonia Julia Sulzbeck Villalobos	●				●
Tales José Bertozzo Bronzato				●	
Valdir Augusto de Assunção	●				

● CHAIRMAN / CHAIROWMAN 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 registered accounting firm 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. Valdir Augusto de Assunção is our audit committee financial expert. Our audit committee is currently composed of four members (all independent, in accordance with the independence requirements of the Law No. 13,303/2016 and CVM Instruction No. 509/2011 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 registered accounting firm, as well as evaluating the independence of our independent registered accounting firm 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 registered accounting firm 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 registered accounting firm 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 "Management and Employees – Management – Board of Directors" in this annual report.

With respect to the relationship of our audit committee with our independent registered accounting firm, as provided in our Bylaws, our Board of Directors is responsible for deciding, among other matters, the appointment and dismissal of independent registered accounting firm, which are prohibited 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 registered accounting firm's services. Our management is required to obtain the audit committee's pre-approval before engaging independent registered accounting firm 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 registered accounting firm and reviews and monitors our independent registered accounting firm's independence and objectivity.



Principal accountant fees and services

The following table sets forth the fees billed to us, in US\$ million, by our independent registered accounting firm KPMG Auditores Independentes Ltda. during the fiscal years ended December 31, 2021 and 2020:

	2021	2020
Audit fees ⁽¹⁾	6.2	6.7
Audit-related fees ⁽²⁾	0.1	1.2
Tax fees ⁽³⁾	0.4	0.3
TOTAL FEES	6.7	8.2

(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), consent letters 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

Relying on the exemption set forth in Rule 10A-3(b)(1)(iv)(E), two members of our audit committee, Mr. Márcio Andrade Weber and Mr. Murilo Marroquim de Souza have been appointed by the Brazilian federal government, which is our controlling shareholder. In our assessment, Mr. Weber and Mr. Marroquim act independently in performing the 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 Law No. 13,303/2016 and CVM Instruction No. 509/2011.

For further information relating to potential changes to the composition of our Board of Directors, see "Management and Employees – Management – Board of Directors" 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



57,983

46,416

10,691

876

2019



49,050

41,485

6,789

776

2020



45,532

38,703

6,208

621

2021

- 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)

38,703

Business Area	2021	2020	2019
Exploration and Production	13,418	14,637	17,971
Refining, Transportation and Marketing	8,796	9,385	9,404
Gas and Power	1,607	1,665	1,783
Others	14,882	15,798	17,258
Total	38,703	41,485	46,416



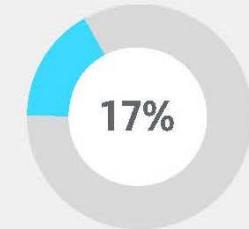
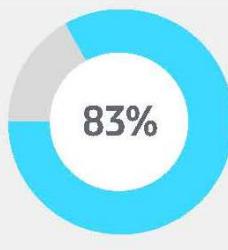
32,167

MEN



6,536

WOMEN



CORPORATE FUNCTION

Manager	11%	Manager	13%
Supervisor	6%	Supervisor	3%
Specialist	2%	Specialist	3%
Other	81%	Other	81%

	As of December 31,		
	2021	2020	2019
Our employees by region (not including our subsidiaries, joint operations or structure entities)			
Southeastern Brazil	32,572	34,047	36,077
Northeastern Brazil	3,840	4,910	7,400
Other locations	2,291	2,528	2,939
Total	38,703	41,485	46,416
Our subsidiaries' employees by region			
Southeastern Brazil	4,901	5,216	5,697
Northeastern Brazil	744	856	2,328
Other locations in Brazil	563	717	2,666
Abroad	621	776	876
Total	6,829	7,565	11,567
TOTAL	45,532	49,050	57,983

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\$ million		
	2021	2020	2019
Salaries, accrued vacations and related charges	2,665	3,064	4,313
Employee training	8	6	49
Profit-sharing distributions	125	7	43
Variable compensation program	469	439	643

For more information on profit-sharing distributions and variable compensation program see respectively “– Labor Relations” and “– Employees Variable Compensation” in this annual report.

Workforce

One of the main current and future challenges for our people management is to ensure the continuous adequacy of our workforce to the business portfolio.

At the end of 2020, we implemented a new headcount planning methodology, called optimal headcount, which aims to determine our workforce needs, considering operational safety and projects requirements. The main goals of the new methodology is to focus on optimizing overhead and meeting business needs.

In addition, we seek to implement the following initiatives to adapt our current workforce to our strategies: improvement of internal workforce mobility practices; flexibility for our portfolio management strategy; training and continuing education programs related to mobility programs; analysis of impacts and costs; critical thinking; knowledge management; and improvement of our workforce profile. These programs, which facilitate the increase of productivity and optimize processes, will also allow us to better adjust our workforce to our business needs.

Employees are one of the most important intangible assets to us and the ability to attract qualified and talented employees, as well as retain and nurture internal talent is critical to our success and sustainability. We focus on attracting the best talent without neglecting our internal talents that have grown with the company, understand the organization, its mission and culture.

In order to meet workforce needs, we prioritize the filling of open positions internally, through organized internal career mobility processes to retain talent and reduce external hiring costs.

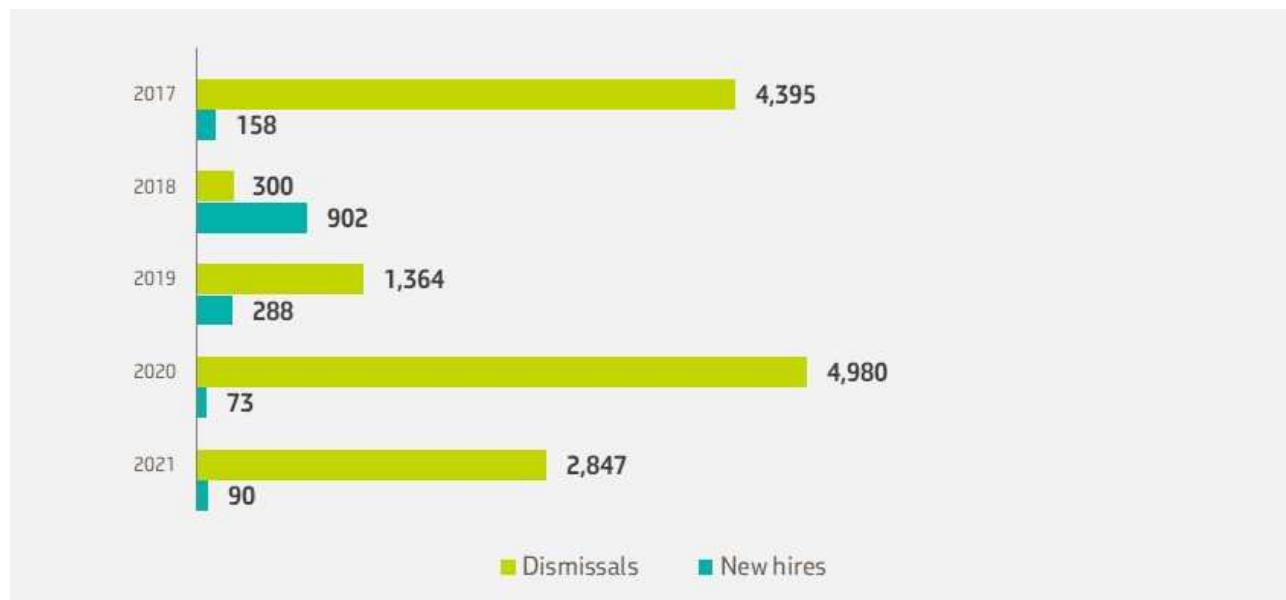
We also have been hiring external employees through different recruitment processes. In order to determine the number of new employees, we consider both our business needs and our current vacancies. In 2021, 7,326 open positions were filled internally, representing 98.8% of the total amount of vacancies.

As one of the measures adopted to achieve our workforce needs, after three years without conducting a public recruitment processes (PSP), in 2021 we launched a PSP to fill 757 vacancies, with 8% of vacancies reserved for disabled people. We had approximately 212,000 applicants and the PSP is expected to be completed in the first half of 2022. In 2021, a total of 90 employees were hired, of which 90% were hired through public recruitment processes from previous years.

Another important tool adopted for workforce adjustments is the Voluntary Severance Program ("PDV"). In 2021, 2,579 employees left the company through the Incentive Retirement Program ("PAI") and the three PDVs, differentiated by target audience: (i) PDV 2019, focused on retired employees, (ii) a program for employees of certain areas undergoing divestment processes and (iii) one focused on administrative employees.

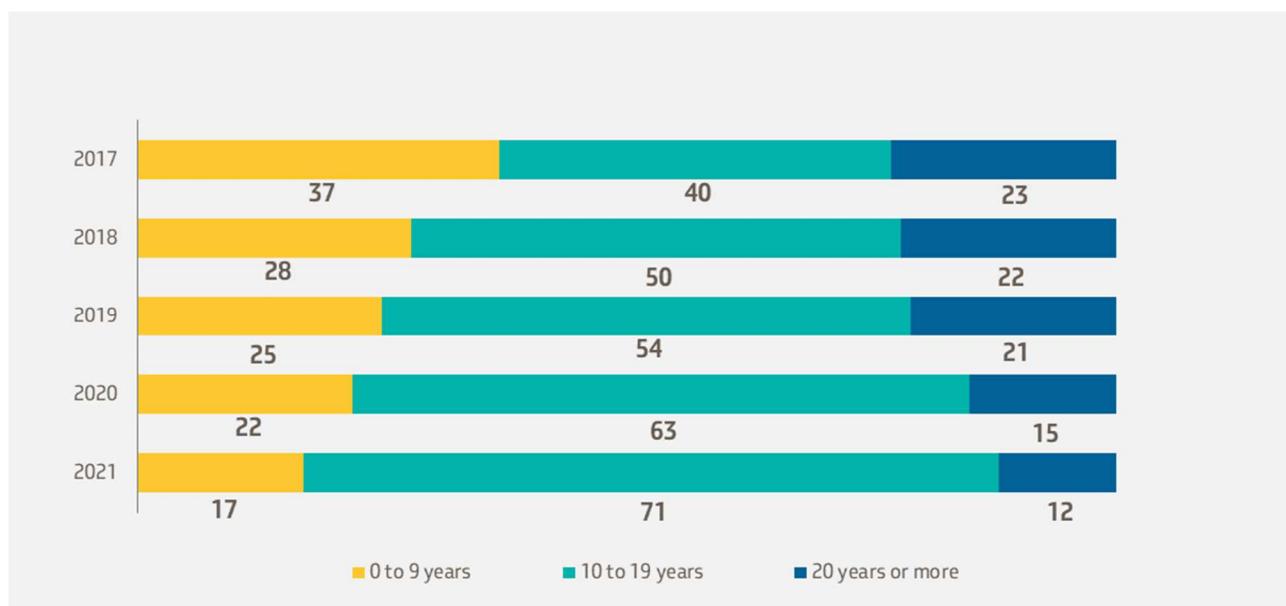
In total, 2,847 employees left the company in 2021, of which 2,702 were voluntary dismissals (includes PDVs and other types of dismissals).

OUR TURNOVER (not including our subsidiaries, joint operations or structure entities)



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. These changes promoted 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 we believe ensures competitive advantage and value to our business.

TIME IN PETROBRAS (not including our subsidiaries, joint operations or structure entities) (%)



Labor Relations

We respect the freedom of association and recognize the right to collective bargaining, as recommended by United Nations Global Pact. This commitment is reinforced by our Human Resources Policy, which determines the implementation of sustainable agreements built through dialogue, ethics and transparency with employee representatives, and by our Code of Ethical Conduct which ensures freedom of union association. We also follow the International Labor Organization ("ILO") conventions ratified by Brazil.

We maintain relationships with 17 trade unions and two federations (i.e., a top-level union entity) of oil workers, as well as eight unions and one federation of maritime workers. We value our relationships with all our stakeholders, including trade unions. For this reason, we invest in open dialog and maintain a permanent bargaining process. As of December 31, 2021, 41% of our employees were unionized.

We have a Collective Bargaining Agreement ("2020-2022 CBA") with all of the oil and maritime trade unions, valid for two years, until August 2022. These agreements include economic and social provisions relating to work, safety conditions, benefits, and other matters. In 2020, there was a negotiation regarding the automatic adjustment of wages and benefits by the cost-of-living index in 2021.

We also set several Individual Employment Agreements with employees who desire this format of agreement and meet the minimum requirements determined by law. In the past years we have used a two-year term agreement that covers the same conditions offered in our CBA.

Currently, 92% of our employees are covered by collective bargaining agreements and 8% of our employees are under individual employment agreements.

In 2021, we increased the salaries and benefits of oil and maritime employees by 10.42% and 11.08%, respectively, according to the conditions negotiated and established in the 2020-2022 CBA.

We also have a Profit Sharing Program ("PLR") Agreement valid for 2021 and 2022, which determines the rules regarding profit sharing payment.

Another right defined in Brazilian legislation is the power of employees to embrace their causes and promote strikes under the principles defined by law. We respect the right to strike but maintain our activities in full operation using contingency plans. The contingency plans represent are the way we can deal with several types of situation, being a and backup plans for operational continuity we may use in case of unexpected situations.

Benefits

Employees Variable Compensation

We adopt a compensation policy in line with market practices in which we operate.

Performance Award Program

Since 2019 we have used the Performance Award Program ("PPP"), a variable remuneration model for all employees. In line with our Strategic Plan, the PPP aims to align the interest between shareholders, executives, career and non-career employees, encourage result-oriented behavior, variable compensation based on results achieved, variable remuneration for task delivery (meritocracy) and contribution to attracting and retaining talent.

In the 2020 fiscal year, the PPP was activated after compliance with the established minimum prerequisites:

- For employees, the PPP was triggered by the achievement of positive net income for the year, excluding the impacts of impairment and exchange variation contained in our net financial result.

- For the members of the Executive Board, the activation was triggered by the achievement of positive net income during the 2020 fiscal year.

As a result, US\$461 million was provisioned as of December 31, 2021, to be paid after approval during the next Annual General Meeting.

During 2021, the scorecards of the organizational units continued to be considered as input for the assessment of members of the board, executive managers and other members of our general structure, which are reflected in the calculation of variable remuneration. As in 2020, these scorecards include the following items: (i) the results of our main metrics such as: Gross Debt (corresponds to the total outstanding balance of contracted debts), Delta EVA® (Economic Value Added - measures the economic profit in a given period minus the cost of invested capital from its operating profit), IGEE (Monitors our performance in relation to the direct emission of greenhouse gases into the atmosphere) and VAZO (calculates the total volume of oil leaked in occurrences with volume above one barrel and which reached bodies of water or non-impermeable soil); (ii) the scores of specific metrics of each executive scorecard (represented by specific indicators and strategic initiatives that address economic, environmental and social factors); and (iii) discretionary assessment made by the immediate superior according to the employee's profile and performance.

The higher the hierarchical level, the greater the weight of the top metrics and, therefore, the multiple remunerations associated with the award reflecting the greater degree of responsibility of the manager in relation to the metrics of his or her area and to our performance metrics.

As approved by our Board of Directors and SEST, program payments will be deferred over five years as a long-term incentive ("LTI") for members of the Executive Board (President and Directors) and, since the 2020 fiscal year, for our Executive Managers and General Managers. The value of such payments will be based on the market value of our shares without factoring in any option to buy our shares. Consequently, Executive Board and Management payments will be carried out as follows: 60% of the value of the Program will be paid in a cash installment while 40% of the balance will be settled in four annual deferred installments, the value of which will be symbolically converted into the corresponding number of our common shares (PETR3), using as a base value their weighted average during the last 60 trading sessions of the applicable fiscal year. The President, Executive Director, Executive Managers or General Managers may exercise the right to receive deferred installments after the established grace periods have been fulfilled. The value of each installment will be equivalent to the conversion of symbolic shares into cash value based on the weighted average of our common shares during the last 20 trading sessions prior to the request date.

Profit Sharing Program ("PLR")

We also have a Profit Sharing Program ("PLR") agreement for the 2021-2022 period for all employees who do not hold leadership and specialist roles (i.e., it would not include individuals holding positions such as managers, specialists and supervisors). The amount provisioned for fiscal year 2021 is equivalent to US\$106.8 million (R\$596.2 million) and will be paid in 2022.

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.

For the 2020 fiscal year, the PLR only applied to maritime employees, since only their unions accepted the proposal, although it was offered to all unions that represent our employees. In June 2021, the amount of profit sharing paid to maritime employees was approximately US\$169,447.00 (R\$896,500,00) corresponding to the results obtained in fiscal year 2020.

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. There are no differences between the benefit plans and contribution rates of the highest governance body, senior executives and all other employees. 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 (mixed type plan that combines defined benefit and defined contribution characteristics), 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 and pensioners 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.

In August 2021, Petros, after attesting to its economic viability, started the operation of the new Petros-3 Plan ("Petros 3"). This is a defined contribution plan, originated from the voluntary option of the PPSP-Renegotiated and PPSP-Not Renegotiated plans participants both for employees and retired employees who joined the PPSP plan after 1970. At the end of the option process, the Petros 3 plan had a total of 2,174 participants.

Thus, there are currently six pension plans in place: four defined-benefit plans, one variable contribution plan and one defined contribution plan which, together, cover 96% of our employees.



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.

In March 2020, our Board of Directors deliberated on a new equalization plan ("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.

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\$ 2.9 billion as of December 31, 2021, as recorded in Petros plans balance sheets at present value.

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.

In 2021, due to the adverse economic scenario, the final projection is for negative profitability for all PPSPs. The PP2 plan, on the other hand, has been showing positive profitability, but below the actuarial targets also due, especially, to the challenging market environment.

Petros will carry out solvency assessments of the plans in compliance with the procedures guided by the applicable rule and, in each specific case, will indicate the most appropriate measures for the treatment of results in order to contribute to the economic and actuarial stability of the plans managed by Petros.

By any means in our liability management process we continuously monitor opportunities related to pension liability management

For more information on the New DEP, see Note 17.3 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, 2021, 2020 and 2019:

	US\$ million		
	2021	2020	2019
Total benefits paid – pension plans	1,336	1,185	1,552
Total contributions – pension plans ⁽¹⁾	2,100	917	1,682
Net actuarial liabilities ⁽²⁾	5,395	10,286	14,508

(1) Contributions of sponsors, including defined contributions recognized in the statement of income (PP-2 and PP-3).

(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 17 to our audited consolidated financial statements.

Health and Pharmacy Benefit Plan

We offer a supplementary health care plan, the *Saúde Petrobras*, which provides for medical, hospital and dental care services to all active and retired employees and their dependents, through the co-participation of all the health care plan participants.

Since April 2021, the *Saúde Petrobras* plan has been operated through a non-profit association called *Associação Petrobras de Saúde* ("APS"). This new management model was created to provide greater corporate security with technology, governance and compliance, through professional management and with expertise in supplementary health. The purpose is to improve the quality of services and assistance to beneficiaries, as well bring more transparency in their administration, cost efficiency and risk segregation, without any changes to the benefits and scope under the plan.

During 2021, we had to absorb 60% of these costs and 40% must be paid by health insurance associates. The agreement settled with unions that represents our employees provides that this cost ratio will be maintained until a new agreement is established.

An independent actuary consultant 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 *Saúde Petrobras* benefit also offers coverage of complementary programs, such as the *Benefício Farmácia* program. This 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.

The table below shows the post-employment benefits paid and outstanding medical liabilities for the years ended December 31, 2021, 2020 and 2019:

	US\$ million		
	2021	2020	2019
Total benefits paid – medical plan ⁽¹⁾	309	310	442
Net actuarial liabilities ⁽²⁾	4,485	5,356	11,986

(1) Composed of *Saúde Petrobras* and *Benefício Farmácia* amounts.

(2) Unfunded medical plan obligations.

For more information on our employee benefits, see Notes 4.4 and 17 to our audited consolidated financial statements and “Risks – Risk Factors” in this annual report.

Compliance and Internal Controls



Compliance

Ethical principles guide our business and our relations with third parties. Our activities follow clearly articulated policies, standards, and procedures that have been formally established by us. These policies and procedures are communicated to all employees and accessible from any company device, with our main corporate policies also available on our website. The information on our website is not and shall not be deemed to be incorporated into this annual report.

We have continually worked to strengthen our Integrity System. We have a Code of Ethical Conduct that provides guidance on the commitments and conduct that we require from our personnel. The Code of Ethical Conduct increases the focus on our values and commitments, providing tools for self-reflection to help employees to comply with our ethical principles while performing their duties.

In order to integrate and strengthen our Integrity System, in addition to our Code of Ethical Conduct we highlight our corporate Compliance Policy, our Guide to Ethical Conduct for Suppliers and our Petrobras Corruption Prevention Program ("PCPP").

To ensure an ethical environment for our business, we work to promote a culture of integrity, the prevention, detection and correction of incidents, including fraud, corruption, conflict of interests and money laundering, the management of our internal controls and the integrity analysis of managers and counterparts.

We offer 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 2021, we launched the Conflict of Interest Prevention Course with the goal of disseminating a culture of integrity. By December 30, 2021, this e-learning training was completed by 37,985 employees or 99.6% of all our personnel. Through practical examples and real cases, the training helps to identify and prevent situations of conflicts of interest in a clear and didactic way. It also teaches how we should act on a daily basis and how to use the available consultation tools. Training was made available and is mandatory to all our employees, including managers and senior management.

In 2021, we also provided training sessions to directors and executive officers, covering mainly the following topics:

- Code of Ethical Conduct;
- Our corporate governance and decision-making process;
- Compliance, internal controls and related party transactions;
- Risk management;
- Business performance;
- Brazilian anti-corruption law;
- Antitrust Compliance;
- Environmental, Social and Governance; and
- Information security.

Code of Ethical Conduct

Created in 2020, our 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 best 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.

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, resilience and trust, 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 addition.

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.

Compliance Policy

The purpose of the Compliance Policy is to ensure that we comply with the laws and rules of regulatory bodies, acting to correct and prevent misconduct.

Drafted in 2014, the Compliance Policy was updated in 2020 with principles and guidelines approved by our Board of Directors. The five principles that guide our compliance actions are:

- All our business and relationships must be guided by the highest values of ethics, integrity and transparency, following all national and international standards and laws, and with zero tolerance for any type of misconduct.
- Our vision, mission, strategies, goals, operations, processes, and activities must reflect our commitment to compliance actions, providing a safe environment for decision making. Our goal is to be a reference in ethics, integrity and transparency in Brazil and worldwide.
- Our actions must be preventive as a priority, to inhibit violations of the rules and reduce the risk of misconduct, such as fraud, corruption, money laundering and financing of terrorism.
- All indications of misconduct must be investigated and measures adopted for the immediate interruption and repair of any damage to the company, generating proportional consequences for those responsible.
- Our actions must convey credibility and act as a positive example to companies and society, exercising leadership in the promotion of a business environment that is increasingly more ethical, honest and transparent, aligned with high performance and our values.

Ethical Conduct Guide for Suppliers

Created in 2020, our Ethical Conduct Guide for Suppliers is the first document exclusively aimed at our suppliers, with guidelines on expected values and ethical behavior. It 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, and 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. It 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 standards. Therefore, we monitor suppliers' compliance through the performance management system, as reinforced in our recent released Quality Guide for Suppliers which can be found at <https://canal fornecedor.petrobras.com.br/en>. The information on this website is not and shall not be deemed to be incorporated by reference into this annual report.

Petrobras Corruption Prevention Program

The Petrobras Corruption Prevention Program ("PCPP") is another document that is part of our Integrity System. The PCPP is based on continuous actions of prevention, detection and correction of misconducts, including fraud, corruption and money laundering.

The program targets our various stakeholders, including senior management, workforce, clients, suppliers, investors, partners, sponsored entities, government and those who relate to and/or represent our interests in the Company's business relations.

Together with the Code of Ethical Conduct and the Compliance Policy of Petrobras, the Program contributes to the commitment of everyone in preventing and fighting against fraud, corruption and money laundering.

Ethics Commission

Our ethics commission acts as a forum for discussion of subjects related to ethics. It also serves in an advisory capacity to our management and workforce, providing recommendations with respect to topics related to ethics management issues, proposing rules for the incorporation of new concepts, and adopting measures to comply with legislation and following 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 background checks and interviews. Our Board of Directors and our Board of Executive Officers approve each new appointment.

Related Party Transactions

In October 2021, in order to comply with Brazilian legislation, as Law No. 13,303/16, Decree No. 8,945/16 and the CVM regulation, our Board of Directors approved the annual review of our policy for related party transactions, aiming at fostering transparency in our procedures, conducting better corporate governance practices. This policy also aims to guarantee the adequate and diligent decision-making process by our management, observing market conditions or appropriate compensatory payment, 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 the specific case of transactions with related parties involving the Federal government, its autarchies, foundations and federal state-owned companies, the latter when classified as outside the normal course of business of the Company by our audit committee, which are within the scope of approval of our Board of Directors, must observe the following special procedure: (i) be analyzed by the audit committee and by the minority committee prior to submission to our Board of Directors, (ii) fall within the purview of our Board of Directors for approval. Any such transaction must be approved by two-thirds of the members present at our Board of Directors meeting.

For additional information regarding our outstanding related party transactions as of December 31, 2021, see Note 37 to our audited consolidated financial statements.

Transactions with our Board of Directors or Executive Officers

Direct transactions with the companies of members of our Board of Directors or our executive officers must follow the conditions of a commercial 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. From the preceding financial year until February 28, 2022, we have not entered into any transaction with related parties which is or was unusual in its nature or conditions. 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\$9,076 million due from the Brazilian federal government and other entities under its control as of December 31, 2021.

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, 2021, this receivable amounted to US\$506 million.

In 2021, constitutional amendments changed the form of payment of judicial debts by the Brazilian Federal Government (*precatórios*), establishing that there will be a limit for annual payments until the end of 2026, including budgetary limitations. Consequently, we expect to receive the amounts of the Petroleum and Alcohol Accounts between 2022 and 2027, depending on the yearly budgetary limitations of the Brazilian federal government.

In addition, we are allowed to invest in securities issued by the Brazilian federal government, 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, 2021, the balance of securities issued by the Brazilian federal government that have been directly acquired and held by us amounted to US\$1,446 million.

For further information on related party transactions, see Note 37 to our audited consolidated financial statements.

Transactions with associates

On December 29, 2021, we signed five contracts with our associate Braskem for the sale and purchase of petrochemicals products. These contracts amount to US\$7.5 billion, equivalent to the remaining values of the prior contracts that were canceled. The new contracts are effective as of January 1, 2022 with maturities between May 2026 and December 2029.

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, 2021. 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 "Business Environmental, Social and Governance — 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, 2021 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 accounting firm has audited the effectiveness of our internal control over financial reporting as of December 31, 2021, as stated in their report, which is included herein.

Changes in Internal Control over Financial Reporting

Since April 2021, our supplementary health care plan has been operated through a non-profit association (APS) and, as a consequence, controls related to its activities have been executed by APS, under our supervision. There were no other significant changes during the fiscal year 2021 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Ombudsman and Internal Investigations

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 denunciations.

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 directs them to the relevant office for follow-up. Allegations regarding compliance issues, which include fraud, corruption and other matters, are sent to the governance and compliance office, which has full access, independence, qualification and autonomy to thoroughly investigate allegations of this nature.

Upon the conclusion of each investigation, we use any material findings to improve our compliance efforts. If the findings in some instances indicate that any of our current or former employees did not comply with certain internal policies, the matter is submitted to the integrity committee, a collegial body that acts independently and reports to the Board of Directors, and appropriate disciplinary measures and remedial actions may apply (or are taken, according with applicable labor laws and internal policies).

We continue to fully cooperate with Brazilian and U.S. authorities, even though the Non-Prosecution Agreement with the DoJ terminated in September 2021 (See "Legal and Tax – Legal Proceedings – Investigations Carried out by Authorities" in this annual report), in an effort to uncover wrongdoing and hold those responsible accountable. We continue to allocate significant resources to investigating allegations of misconduct and responding appropriately to investigative findings. We continue to improve our internal investigation procedures to ensure that investigations are conducted completely and efficiently and that disciplinary measures are imposed fairly, uniformly and promptly.

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.

Shareholder Information



Listing

We are a publicly traded company and we are listed in Brazil and abroad, as follows:



STOCK* EXCHANGE



BRAZIL

CAPITAL MARKET
REGULATOR
CVM



USA

CAPITAL MARKET
REGULATOR
SEC

CORPORATE GOVERNANCE

LEVEL 2

PETR3
BRPETRACNOR9

PETR4
BRPETRACNPR6

CLOSING PRICE
DECEMBER 31, 2021

PETR3 R\$ 30.70

PETR4 R\$ 28.45

LEVEL 3

PBR
US71654V408

PBRA
US71654V101

PBR U\$ 10.98
PBRA U\$ 10.11

TOTAL NUMBER OF SHARES**
DECEMBER 31, 2021

13,044,201,261

PETR3: 5,454,997,418 SHARES
PETR4: 5,011,007,949 SHARES

PBR: 1,987,233,964 ADRs
PBRA: 590,961,930 ADRs

* 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, 2021, the controlling group was composed of the Brazilian federal government, BNDES and BNDESPar.





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 due to our listing on the Level 2 listing segment:

- the attributions of our minority committee are expanded;
- our Board of Directors is composed of at least 40% independent members;
- we 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.

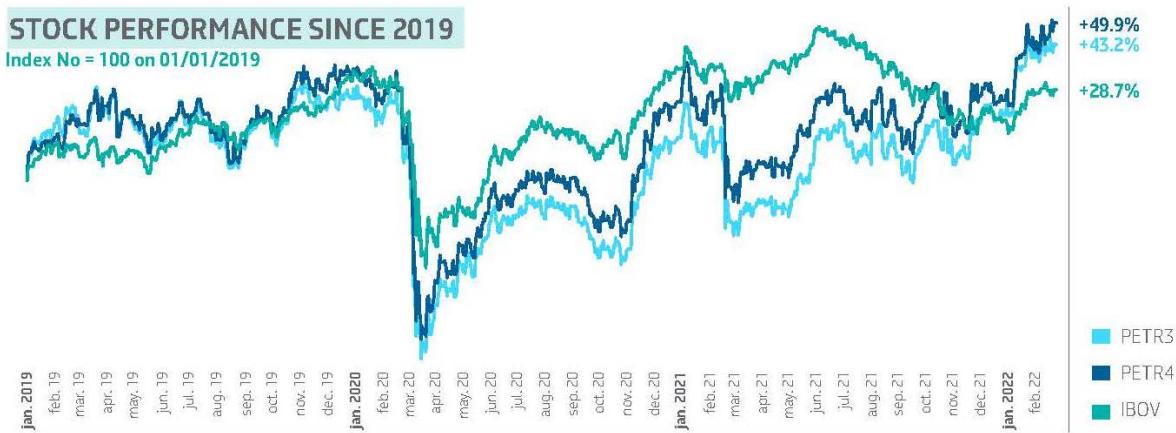
Holders of our common shares are entitled to one voting right for each unit of common shares held. Holders of our preferred shares are not entitled to voting rights, except for: (i) the right to appoint one member of our Board of Directors and one member of our Fiscal Council; and (ii) certain matters 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 depository bank, JPMorgan Chase Bank, N.A ("JPMorgan" or "Depository") which, since January 2, 2020, acts as the depository 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 depository bank while shareholders have the right to vote directly at the shareholders' meeting.

On December 31, 2021, there were 1,987,233,964 outstanding common shares and 590,961,930 outstanding preferred shares represented by ADSs. There has been no change in the past five 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.

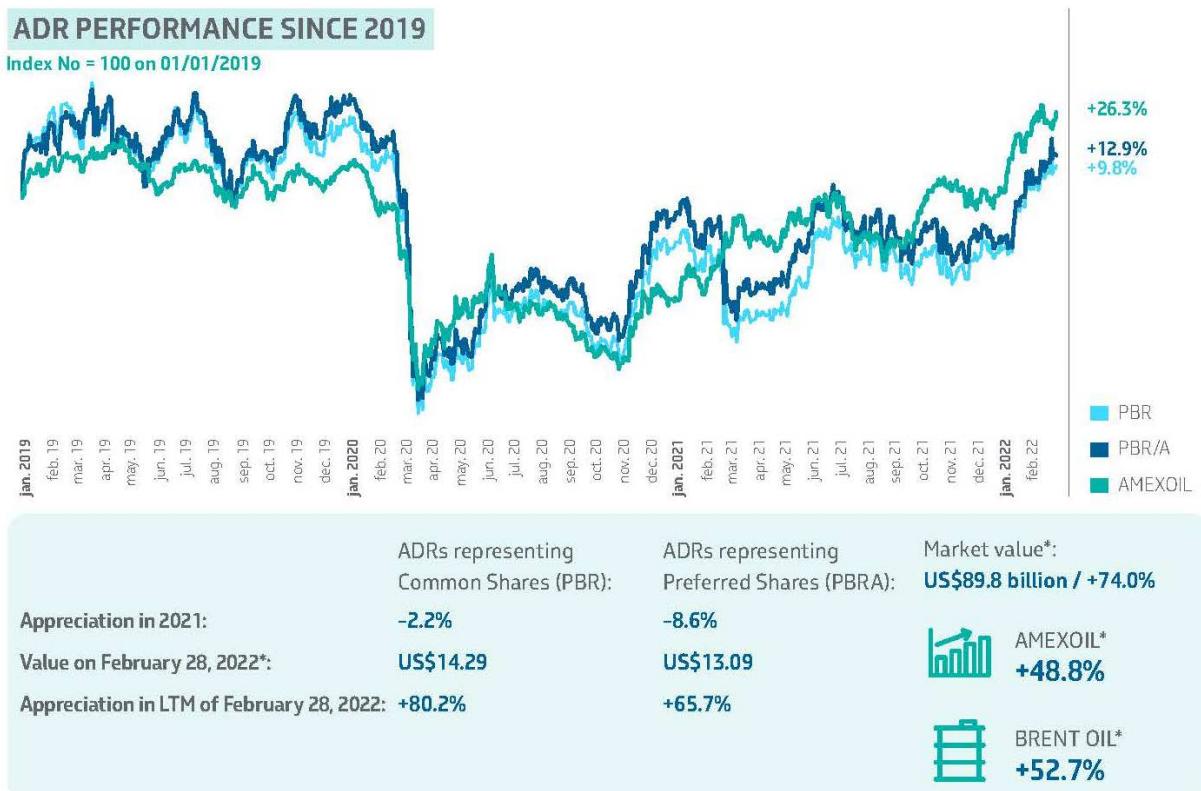
In the beginning of 2022, our stock value increased, and as of March 29, 2022, our stock price was US\$14.49 (PBR) and US\$ 13.58 (PBR/A). In 2021, our stock value was nearly flat, despite the rising Brent prices and improvements in our financial and operational performance. Our stock outperformed IBOV at B3 and underperformed AMEXOIL at NYSE. 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 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.



Appreciation in 2021:	+6.4%	Common Shares (PETR3):	+0.4%	Preferred Shares (PETR4):	R\$34.00	Market value*: R\$461.2 billion / +59.3%
Stock Value as of February 28, 2022*:	R\$36.37					Ibovespa* +2.8%
Appreciation in LTM of February 28, 2022:	+64.2%					

* Information regarding LTM of February 28, 2022.

Source: Bloomberg



* Information regarding LTM of February 28, 2022.

Source: Bloomberg

The following table sets forth information concerning the ownership of our common and preferred shares as of February 28, 2022, 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	—	—	900,210,496	16.07	900,210,496	6.90
All members of our Board of Directors, Executive Officers and members of our Fiscal Council (permanent and alternate) (28 people in total)	—	—	67,877	0.00	67,877	0.00
Others	3,701,983,331	49.74	4,566,516,157	81.52	8,268,499,488	63.39
TOTAL	7,442,454,142	100.00	5,602,042,788	100.00	13,044,496,930	100.00

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.

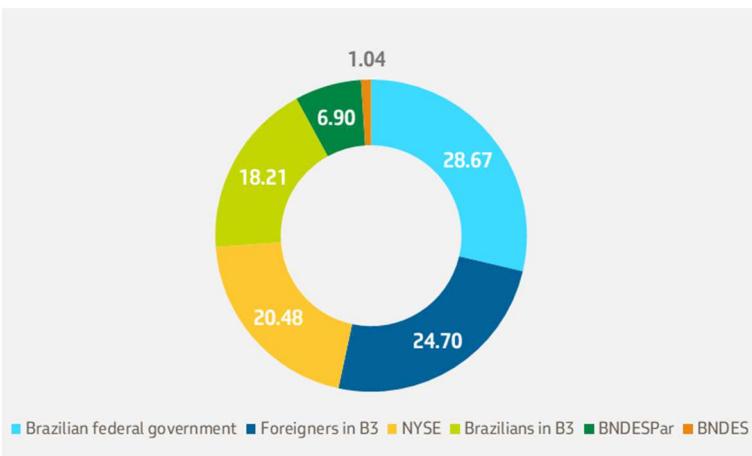
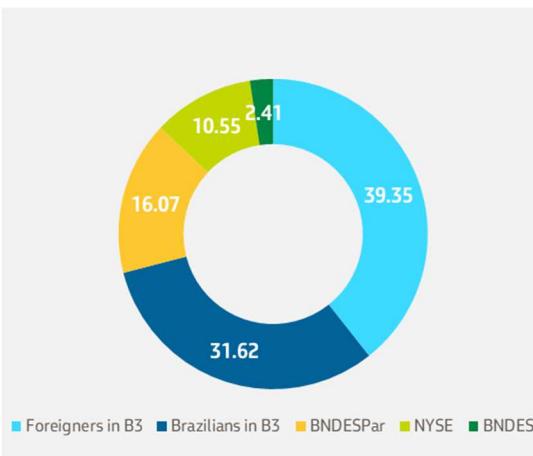
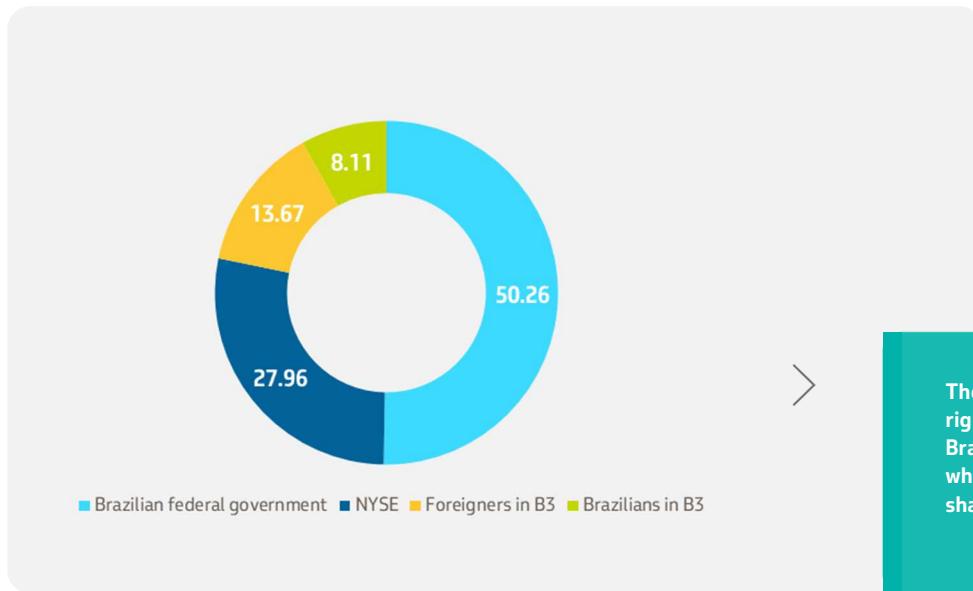
Under Brazilian Corporate Law and Law No. 13,303/16, the Brazilian federal government is required to own at least a majority of our voting shares.

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 800,000 shareholders at the B3 and ADR accounts at the NYSE.

TOTAL CAPITAL⁽¹⁾ (%)NON-VOTING CAPITAL⁽¹⁾ (%)VOTING CAPITAL⁽¹⁾ (%)

The majority of our voting rights are held by the Brazilian federal government, which holds 50.26% of our shares with voting rights.

(1) Information about our shareholders as of February 28, 2022.

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 depositary at least 30 calendar days prior to a shareholders' meeting. Upon receipt of our shareholders' meeting notice, the depositary 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 depositary will be entitled to instruct the depositary 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 depositary 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;
- approve the requirements of our nomination policy, in addition to the requirements provided by law applicable to boards of directors and fiscal councils; and
- approve in the case of publicly-traded company, the execution of transactions with related parties, and the sale or contribution of assets to another company, if the value of the transaction corresponds to more than 50% (fifty percent) of the value of the total assets listed in the last approved balance sheet.

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.

Dividend payments for each fiscal year must be approved by our shareholders at the annual general meeting of shareholders. The profits are distributed to outstanding shares 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 2021, we improved our dividend policy. The enhancement of the dividend policy became important because of the anticipated and ultimate achievement of the target of gross debt below US\$60 billion in the third quarter of 2021, originally scheduled for 2022.

We set an ideal gross debt level of US\$60 billion, including commitments related to leasing. For the purposes of the dividend policy, we will exercise flexibility around this debt target, applying a gross debt of US\$65 billion as a criterion to define the method to calculate the remuneration to be distributed.

Additionally, we defined that dividend distribution payments should be made quarterly. The acquisition of PP&E and intangibles assets of the original free cash flow formula was also adjusted to include the signing bonus of the bidding rounds.

The improvement also had the goal of simplifying the dividend policy and establishing an annual minimum remuneration, promoting greater predictability to the cash flow payments to shareholders.

In all distribution parameters, the remuneration to shareholders must follow the rules set forth in Law 6,404/76, in our Bylaws, and must not compromise our short, medium, and long-term financial sustainability.

The dividend policy provides the following parameters for the distribution of dividends, which should be followed in the decisions of the Board of Directors and in the Management proposals to the Annual General Meeting:

- 1. We establish a minimum annual compensation of US\$4 billion for fiscal years in which the average price of Brent is above US\$40/bbl, which may be distributed regardless of our level of indebtedness, as long as the principles set forth in the policy are observed.
- 1.1 The minimum annual compensation should be the same for common shares and preferred shares, provided that it exceeds the minimum amount for preferred shares set forth in our Bylaws.
- 2. In case of gross debt equal to or less than US\$65 billion and positive net income for the year, to be verified in the last quarterly result and approved by the Board of Directors, we should distribute to our shareholders 60% of the difference, calculated in Brazilian *reais*, between Net cash provided by operating activities and acquisition of PP&E and intangibles assets, according to the equation below, provided that the result of this formula is higher than the amount provided in item 1 and does not compromise our financial sustainability:

**Shareholder remuneration = 60% x (Net cash from operating activities -
Acquisition of PP&E and intangible asset)**

- 3. Regardless of our level of indebtedness, we may, in exceptional cases, pay extraordinary dividends, exceeding the minimum legal mandatory dividend and/or the amounts established in items 1 and 2, as long as our financial sustainability is preserved.

Furthermore, we may exceptionally approve the distribution of extraordinary dividends even in the event of no net income, as long as the rules set forth in Law No. 6,404/76 are complied with and the criteria defined in the dividend policy are observed.

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 Corporate 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 amounts are 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 2021 are expected to be US\$18,541 million and will be voted on at our shareholder's annual general meeting to be held in April 2022. For further information, see Note 34.5 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.

Depository 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\$0.05 (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 Depository

The Depository 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, 2021, 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 not 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 oil products 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 products 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 products 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.

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.

In October 2021, in accordance with the guidelines established by CNPE in Resolution No. 14/2020, ANP established the new marketing model for biodiesel acquisition to substitute the relevant bidding procedure that will be in force by January 2022 (Resolution No. 857/2021). Consequently, biodiesel producers may be sold directly to distributors in order to observe the mandatory percentage of biodiesel in diesel and there is no other regulatory requirement for us to intermediate this commercial relationship.

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 Laws

In 2011, ANP Resolution No. 52 was enacted, 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.

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.

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. This agreement includes the sale of shareholdings in gas transportation and distribution companies and, among other matters, establishes measures to release capacity in gas transportation pipelines and includes our commitment to negotiate, in good faith, third party access to our processing plants. 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 to investigate our natural gas business.

In 2021, the Brazilian Congress enacted Law No. 14,134, the so-called "New Gas Law", which revoked the Law No. 11,909 and represents a new regulatory framework for the Brazilian natural gas market, introducing relevant legal innovations.

Among other matters, the New Gas Law provides: (i) negotiated access to flow pipelines, natural gas processing units (UPGNs) and LNG Terminals; (ii) the implementation of the entry and exit model for the transport of natural gas; (iii) the change in the regime of use of transportation pipelines and storage facilities (from concession to authorization); (iv) the unbundling of the natural gas transportation and distribution segments; and (v) the change of competence to approve the import and export of natural gas (from the Ministry of Mines and Energy (MME) to the ANP).

In addition, the New Gas Law will ensure legal certainty for administrative rules that arose from the "New Gas Market" Program, instituted by the Federal Government in mid 2019.

Also in 2021, Decree No. 10,712 / 2021 was published, which regulates the New Gas Law, and formally revokes Decree No. 7,382 and Decree No. 9,616.

Despite the significance of the publication of the New Gas Law, we expect further action by the ANP to establish measures that will be necessary to implement most of the changes brought about by the new law.

For more information on our agreement with CADE, see "Our Business – Portfolio Management" and "Risks—Risk Factors—Operational Risks" 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.

Costs related to these actions are US\$138.2 million. From this total amount, US\$ 75 million has already been spent since 2018 and US\$ 63.2 million will be used according to the progress of the realization of the contractual commitments and guidelines of IBAMA. The main ones are:

- Operational, technological or process adequacy adjustments in 28 marine production platforms for the disposal of produced water, to be framed according to the measurement method of TOG SM 5520-B;
- Hiring of third party laboratory for TOG analysis;
- Installation of radars on 8 platforms;
- Providing air and orbital monitoring;
- Vessel supply for monitoring; and
- Payment of compensatory measure.

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.

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 – 1st 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 2.18 to this annual report.

Second and Third Production Sharing Agreements – 2nd and 3rd Production Sharing Bidding Rounds

In 2017, we acquired, in partnership with other international oil companies, three offshore blocks in the 2nd and 3rd 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 2nd and 3rd 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%) Shell (30%) Repsol Sinopec (25%)	90	80.00
Peroba	Petrobras (40%) BP (40%) CNODC (20%)	800	76.96
Alto de Cabo Frio Central	Petrobras (50%) BP (50%)	250	75.86

Fourth and Fifth Production Sharing Agreements – 4th and 5th 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 First Transfer of Rights Surplus Production Sharing Agreements – 6th and 1st ToR Surplus Production Sharing Bidding Rounds

On November 6, 2019, we acquired, together with other international companies, the Búzios 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.

2nd ToR Surplus Production Sharing Bidding Round

On December 17, 2021, we acquired, together with other international companies, the exploration and production rights over the surplus volumes in the Atapu and Sépia blocks. The production-sharing agreements are expected to be signed by April 2022 and 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. The only criteria adopted by the ANP to define the winning bidder was the amount of oil profit 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.

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, 2021 was US\$1,522 million (about US\$235 million in 2021, US\$155 million in 2020, US\$220 million in 2019, US\$457 million in 2018, and US\$252 million in 2017).

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 further information regarding Lava Jato and its impacts on us, see "Risks—Risk Factors—We may face additional proceedings related to the Lava Jato investigation" and Note 21 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 recognized improvements to our compliance program, internal controls and anti-corruption procedures. We have committed to continue evaluating and improving these and other efforts.

We fulfilled the obligations set forth in the agreement with the DoJ, including continuing to enhance our integrity program and self-reporting during the agreement's three-year term. Accordingly, in 2021 the agreement was fulfilled.

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.

Investor Claims

Netherlands: Collective action in the Netherlands

On January 23, 2017, the Stichting Petrobras Compensation Foundation ("Foundation") filed an action before the district court in Rotterdam, in the Netherlands, against us and our subsidiaries Petrobras International Braspetro B.V. (PIBBV), Petrobras Global Finance B.V. (PGF BV), our former joint venture PO&G Petrobras Oil & Gas B.V. (PO&G) and some of our former managers.

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 relief from the Dutch court.

On August 23, 2017, a hearing was held at the District Court in Rotterdam ("Court") to establish the timeframe for proceedings. We (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 the Foundation's claims, 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 our 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 us presented the oral arguments at a hearing held on January 26, 2021.

On May 26, 2021, the Court decided that the collective action shall continue and that the arbitration clause of our bylaws does not bar its shareholders from access to the Dutch courts and that the Foundation can

represent the interests of these shareholders. Notwithstanding the foregoing, the Court decided that our investors who have commenced arbitration proceedings, as well as our investors who have commenced proceedings in which the independent public court has ruled by final decision that they are bound by the arbitration clause, are excluded from the collective action. The lawsuit has entered the merits phase.

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 we 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 us.

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, we are unable to make a reliable estimate of eventual loss arising from this action. We are a 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 us to make a reliable estimate of an eventual loss arising from 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.

We deny the allegations presented by the Foundation and intend to defend ourselves vigorously.

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 it is 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.

In 2021, there were no material developments that could change the position described in the paragraph above.

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" in the Argentine 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. On March 4, 2021, the court (Room A of the Economic Criminal Chamber) decided that this criminal action should be transferred from the Criminal Economic Court No. 3 of the city of Buenos Aires to the Criminal Economic Court No. 2 of the same city. 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, currently under review by Argentine Courts of Appeal. On October 21, 2021, the Court of Appeals overturned the lower court decision that had recognized our immunity from jurisdiction in Argentina on the grounds that the matter should be reassessed after the production of evidence. We have appealed against this decision before the Court of Cassation, which is still pending judgment. On the same occasion, the Court of Appeals recognized that the Association could not act as a representative of financial consumers, due to the loss of its registration with the competent Argentine bodies.

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. During 2020 and 2021, the parties engaged in extensive fact and expert Discovery, and filed motions for summary judgment.

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, which is still ongoing.

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-owned companies are allowed to sell their corporate control in affiliates' companies provided that such state-owned 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. As of December 2021, 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 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 August 12, 2021.

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 Brazilian Supreme Court ("STF") suspended the effects of the decision issued by the TST and called for the national suspension of the ongoing proceedings relating to RMNR.

In 2021, the Justice Rapporteur of STF recognized the validity of the collective bargaining agreement freely entered into between us and the unions, reversing the Superior Labor Court decision. An appeal was filed against Reporting Justice's decision.

Currently, the judgment of the appeals filed by the plaintiff and by several *amici curiae* against the decision of the Justice Rapporteur is in progress at the first chamber of STF, formed by five Justices. As of March 25, 2022, three Justices deliberated in favor of the company, one Justice recused himself from the case and one Justice requested to see the case records. Judgment of this appeal is therefore still pending.

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. The effect on our largest provisions, including RMNR provisions, is already taken into account in our results.

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 the parties are waiting for the arbitration award.

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 filed 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.

Petros

Since 2013, lawsuits classified as "Petros Class Actions" were filed by unions and associations related to Fundação Petrobrás de Seguridade Social (Petros), whereby we are being sued to contribute directly to the pension plan scheme, suspension of the balancing plan (*plano de equacionamento*), payment of increased benefits to participants and beneficiaries, payment of all actuarial and financial insufficiencies of the plan and estimated economic value of the participants in solving the entity's accumulated deficits based on allegation of fraud and mismanagement of Petros.

There are also lawsuits filed by Petros against us, requesting payment of contributions for a reinstated employee, payment of employer contributions for increased judicial benefits and payment of amounts to restore the mathematical reserve. We filed a lawsuit against PETROS to obtain the reimbursement of amounts paid by us as a consequence of judicial rulings according to which PETROBRAS and PETROS would have a joint and several liability.

Natural Gas Distributors

Recently, we were sued by some natural gas distributors and/or public entities. The requests in the lawsuit seek the extension of the terms of natural gas supply contracts that would have expired in December 2021. Since the prices of natural gas showed a large increase in the last months of 2021, we offered to the natural gas distributors proposals for new contracts with prices aligned with the current natural gas market. However, some natural gas distributors and/or public entities intend to avoid the adjusted prices alleging that we abused our economic power. In these cases, judges granted the injunction to maintain the previous contracts' prices. We appealed against such decisions to the Brazilian Courts, and the appeals are pending judgment. In addition, since the parties had agreed to resolve the disputes by arbitration, we filed arbitration proceedings, which are all confidential.

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. After an unsuccessful motion to vacate the award, in 2019, we paid the amount of the award to Vantage while preserving our right to appeal. In 2020, the Court of Appeals affirmed Vantage's judgment on the award. In January 2021, we filed a petition for a writ of certiorari before the Supreme Court of the United States, which was denied.

Environmental

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 in July 2000. In September 2019, we were sentenced in the mentioned civil action which leaded us to sign an agreement ("*acordo judicial*") in October 2021, in the amount of US\$253 million (to be paid in four quarterly installments starting in October 2021), to terminate the obligation mentioned above. The agreement has been signed with the Federal Prosecutor's Office, the State of Paraná Prosecutor's Office, the State of Paraná, Brazilian Institute of the Environment and Renewable Natural Resources ("IBAMA"), the State of Paraná Environmental Agency (Instituto Água e Terra - IAT) and Araucária County. The judicial procedures follow only to discuss lawyer's fees.

For further information on our material legal proceedings, see Note 18 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 18 to our audited consolidated financial statements.

Tax

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 the accounting results of our foreign subsidiaries for Brazilian income tax purposes based on Brazilian statutory corporate rates as established by Law No. 12,973/2014.

We follow the transfer pricing rules in transactions involving related parties in the countries that we perform our activities.

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.

For further information regarding our tax collection disclosed in our Tax Report 2021, please visit our website at www.petrobras.com.br/ir. The information available on our website is not and shall not be deemed to be incorporated by reference to this annual report.

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 zero 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 2021, we paid this government take on 13 of our fields, namely Barracuda, Jubarte, Leste do Urucu, Marlim Leste, Marlim Sul, Mexilhão, Rio Urucu, Roncador, Sapinhoá, Tartaruga Verde, Manati, Albacora Leste and Tupi.

- 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 into 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 oil and gas 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 ("CONFAB"), 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. It is possible to argue that the ADSs do not fall within the definition of assets located in Brazil for the purposes of this law, but there is still neither pronunciation 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 Provisória*) 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 described in CMN Resolution No. 4,373. The Brazilian tax authorities 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 tax legislation 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 tax authorities

may increase such rate at any time up to 1.5% of the transaction amount per day, but the tax increase cannot be applied retroactively.

The IOF on transfer of shares traded on the Brazilian Stock Exchange which have the specific purpose of backing the issuance of depositary receipts traded abroad, have been reduced from 1.5% to zero since 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 depositary 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 are 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 2021 or 2020 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 2022 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 considerations or 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" or "Dutch", it refers only to the part of the Kingdom of the Netherlands located in Europe. In addition, the summary is based on the assumption that the notes issued by PGF do not qualify as equity for Dutch tax purposes.

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

All payments of interest and principal made by or on behalf of PGF under the notes to holders of notes may be made free of withholding or deduction of, for or on account of any taxes of any nature imposed, levied, withheld or assessed by the Netherlands or any political subdivision or taxing authority thereof or therein except that Dutch withholding tax at a rate of 25.8% (rate for 2022) may apply with respect to payments of interest and principal made or deemed to be made by or on behalf of PGF, if such payments are made or deemed to be made to an entity related to PGF (within the meaning of the Dutch Withholding Tax Act 2021, *Wet Bronbelasting 2021* see below), 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 entity and there is an artificial arrangement or transaction or a series of artificial arrangements or transactions; or
- is not considered to be the recipient of the interest in its jurisdiction of residence because such jurisdiction treats another entity as the recipient of the interest (a hybrid mismatch); or
- is not resident in any jurisdiction (also a hybrid mismatch); or
- is a reverse hybrid (within the meaning of Article 2(12) of the Dutch Corporate Income Tax Act; *Wet op de vennootschapsbelasting 1969*), if and to the extent (x) there is a participant in the reverse hybrid holding a Qualifying Interest in the reverse hybrid, (y) the jurisdiction of residence of the participant holding the Qualifying Interest in the reverse hybrid treats the reverse hybrid as transparent for tax purposes and (z) such participant would have been subject to Dutch withholding tax in respect of the payments of interest without the interposition of the reverse hybrid,
- all within the meaning of the Dutch Withholding Tax Act 2021.

Related entity

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 direct or indirectly held interest – either by an entity individually or jointly if an entity is part of a collaborating group (*samenwerkende groep*) – that enables such entity or such collaborating group to exercise 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 inkomenstbelasting 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 such person's 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 guarantees, 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 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 an amount equal to or greater 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 and 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 and 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 ANP (incorporated by reference to Exhibit 2.47 to the Annual Report and 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)).



No.	Description
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 and 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	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)).
2.15	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)).
2.16	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)).
2.17	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)).
2.18	Production Sharing Agreement, dated as of December 2, 2013, among Petrobras, Shell Brasil Petróleo Ltda., Total E&P do Brasil Ltda., CNOOC Brasil Petróleo e Gás Ltda. and CNOOC Petroleum Brasil Ltda., the Brazilian Federal Government, Pré-Sal Petróleo S.A.—PPSA and the ANP (incorporated by reference to the Annual Report and Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 30, 2014 (File No. 001-15106)).
2.19	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)).
2.20	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)).
2.21	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)).

No.	Description
2.22	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)).
2.23	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)).
2.24	Seventeenth 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 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)).
2.25	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)).
2.26	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)).
2.27	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)).
2.28	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)).
2.29	First Amendment to the Guarantees, 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)).
2.30	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 2015 (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)).
2.31	Guaranty for the 6.850% Global Notes due 2015, 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)).
2.32	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)).
2.33	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)).
2.34	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



No.	Description
	(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)).
2.35	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)).
2.36	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)).
2.37	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)).
2.38	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)).
2.39	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)).
2.40	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.
2.41	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.
2.42	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)).
2.43	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)).
2.44	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)).
2.45	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)).
2.46	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)).
2.47	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)).



No.	Description
2.48	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).
2.49	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).
2.50	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).
2.51	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).
2.52	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)).
2.53	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).
2.54	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).
2.55	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).
2.56	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).
2.57	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).
2.58	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).
2.59	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).
2.60	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'



No.	Description
	Registration Statement on Form F-4, filed with the SEC on July 6, 2020 (as amended on July 28, 2020) (File No. 333-239714).
2.61	Fourth Supplemental Indenture for the 5.500% Global Notes due 2051, dated as of June 10, 2021, between Petrobras, PGF 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 10, 2020 (File No. 001-15106)).
2.62	Guaranty for the 5.500% Global Notes due 2051, dated as of June 10, 2021, 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 June 10, 2020 (File No. 001-15106)).
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.
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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

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 30, 2022.

Petróleo Brasileiro S.A.—PETROBRAS

By: _____

Name: Joaquim Silva e Luna

Title: Chief Executive Officer

By: _____

Name: Rodrigo Araujo Alves

Title: Chief Financial Officer and Chief Investor
Relations Officer



Abbreviations

bbl	Barrels
bbl/d	Barrels per day
bcf	Billion cubic feet
bn	Billion (thousand million)
bnbbl	Billion barrels
bncf	Billion cubic feet
bnm ³	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
kgCO ₂ e/boe	Kilogram of carbon dioxide equivalent per barrel of oil equivalent
KgCO ₂ e/CWT	Kilogram of carbon dioxide equivalent per complexity weighted ton
km	Kilometer
km ²	Square kilometers
m ³	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 ³	Thousand cubic meters
mm ³ /d	Thousand cubic meters per day
mm ³ /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
mmcfc	Million cubic feet
mmcfd	Million cubic feet per day
mmm ³	Million cubic meters
mmm ³ /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
tCO ₂ e	Tonnes of carbon dioxide equivalent
t/d	Metric ton per day
Tcf	Trillion cubic feet
US\$	United States dollars
/d	Per day

Conversion table

1 acre	=	43,560 square feet	=	0.004047 km ²
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 ³ 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)

Cross-Reference to Form 20-F

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Petróleo Brasileiro S.A. - Petrobras
Rio de Janeiro

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, 2021 and 2020, the related consolidated statements of income, comprehensive income, changes in shareholders’ equity and cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021, 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, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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 17 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, 2021, the defined benefit obligations for these pension and health care plans were US\$ 9,880 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 comparisons 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 25 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, 2021 was US\$ 23,734 million. For the year ended December 31, 2021, the amount of impairment reversals recognized in relation to the exploration and production CGUs was US\$ 3,373 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, 2021 with actual cash flows in this year; and
- 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 18 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 19 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, 2021, the carrying amount of the provision for decommissioning costs was US\$15,619 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 Ltda.

KPMG Auditores Independentes Ltda.

We have served as the Company's auditor since 2017.

Rio de Janeiro – Brazil
March 30, 2022

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, 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, 2021 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.

Joaquim Silva e Luna
Chief Executive Officer

Rodrigo Araujo Alves
Chief Financial Officer and Chief Investor Relations Officer

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

PETROBRAS

As of December 31, 2021 and December 31, 2020 (Expressed in millions of US Dollars, unless otherwise indicated)

Assets	Note	12.31.2021	12.31.2020	Liabilities	Note	12.31.2021	12.31.2020
Current assets				Current liabilities			
Cash and cash equivalents	7.1	10,467	11,711	Trade payables	15	5,483	6,859
Marketable securities	7.2	650	659	Finance debt	32.1	3,641	4,186
Trade and other receivables	13.1	6,368	4,731	Lease liability	33	5,432	5,698
Inventories	14	7,255	5,677	Income taxes payable	16.1	733	198
Recoverable income taxes	16.1	163	418	Other taxes payable	16.2	4,001	2,636
Other recoverable taxes	16.2	1,183	2,177	Dividends payable	34.5	-	858
Others	20	1,573	1,230	Employee benefits	17	2,144	3,502
		27,659	26,603	Others	20	1,875	1,603
Assets classified as held for sale	31	2,490	785	Liabilities related to assets classified as held for sale	31	23,309	25,540
		30,149	27,388			867	685
						24,176	26,225
Non-current assets				Non-current liabilities			
Long-term receivables				Finance debt	32.1	32,059	49,702
Trade and other receivables	13.1	1,900	2,631	Lease liability	33	17,611	15,952
Marketable securities	7.2	44	44	Income taxes payable	16.1	300	357
Judicial deposits	18.2	8,038	7,281	Deferred income taxes	16.1	1,229	195
Deferred income taxes	16.1	604	6,451	Employee benefits	17	9,374	14,667
Other recoverable taxes	16.2	3,261	3,158	Provisions for legal proceedings	18.1	2,018	2,199
Others	20	487	635	Provision for decommissioning costs	19	15,619	18,780
		14,334	20,200	Others	20	2,150	2,057
				Total liabilities		80,360	103,909
						104,536	130,134
Investments	29	1,510	3,273	Equity			
Property, plant and equipment	23	125,330	124,201	Share capital (net of share issuance costs)	34.1	107,101	107,101
Intangible assets	24	3,025	14,948	Capital reserve and capital transactions		1,143	1,064
		144,199	162,622	Profit reserves		72,811	65,917
Total assets		174,348	190,010	Accumulated other comprehensive (deficit)		(111,648)	(114,754)
				Attributable to the shareholders of Petrobras		69,407	59,348
				Non-controlling interests	29.5	405	528
						69,812	59,876
						174,348	190,010

The notes form an integral part of these financial statements.

CONSOLIDATED STATEMENTS OF INCOME
PETROBRAS

Years ending December 31, 2021, 2020 and 2019 (Expressed in millions of US Dollars, unless otherwise indicated)

	Note	2021	2020	2019
Sales revenues	8	83,966	53,683	76,589
Cost of sales	9.1	(43,164)	(29,195)	(45,732)
Gross profit		40,802	24,488	30,857
Income (expenses)				
Selling expenses	9.2	(4,229)	(4,884)	(4,476)
General and administrative expenses	9.3	(1,176)	(1,090)	(2,124)
Exploration costs	26	(687)	(803)	(799)
Research and development expenses		(563)	(355)	(576)
Other taxes		(406)	(952)	(619)
Impairment of assets	25	3,190	(7,339)	(2,848)
Other income and expenses	10	653	998	1,199
		(3,218)	(14,425)	(10,243)
Income before net finance expense, results of equity-accounted investments and income taxes		37,584	10,063	20,614
Finance income		821	551	1,330
Finance expenses		(5,150)	(6,004)	(7,086)
Foreign exchange gains (losses) and inflation indexation charges		(6,637)	(4,177)	(3,008)
Net finance expense	11	(10,966)	(9,630)	(8,764)
Results of equity-accounted investments	29.2	1,607	(659)	153
Net income (loss) before income taxes		28,225	(226)	12,003
Income taxes	16.1	(8,239)	1,174	(4,200)
Net income from continuing operations for the year		19,986	948	7,803
Net income from discontinued operations for the year		-	-	2,560
Net income for the year		19,986	948	10,363
Net income attributable to shareholders of Petrobras		19,875	1,141	10,151
Net income from continuing operations		19,875	1,141	7,660
Net income from discontinued operations		-	-	2,491
Net income (loss) attributable to non-controlling interests		111	(193)	212
Net income (loss) from continuing operations		111	(193)	143
Net income from discontinued operations		-	-	69
Basic and diluted earnings per common and preferred share - in U.S. dollars	34.6	1.52	0.09	0.78
From continuing operations		1.52	0.09	0.59
From discontinued operations		-	-	0.19

The notes form an integral part of these financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
PETROBRAS

Years ending December 31, 2021, 2020 and 2019 (Expressed in millions of US Dollars, unless otherwise indicated)

	2021	2020	2019
Net income for the year	19,986	948	10,363
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on post-employment defined benefit plans			
Recognized in equity	5,169	2,415	(5,589)
Deferred income tax	(1,340)	(127)	1,491
	3,829	2,288	(4,098)
Unrealized gains (losses) on equity instruments measured at fair value through other comprehensive income			
Recognized in equity	-	(2)	-
Deferred income tax	-	1	-
	-	(1)	-
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	(3,949)	(21,460)	(3,510)
Reclassified to the statement of income	4,585	4,720	3,136
Deferred income tax	(215)	5,690	126
	421	(11,050)	(248)
Cumulative translation adjustments (*)			
Recognized in equity	(1,314)	(5,211)	(1,465)
Reclassified to the statement of income	41	-	34
	(1,273)	(5,211)	(1,431)
Share of other comprehensive income in equity-accounted investments			
Recognized in equity	22	(378)	69
Reclassified to the statement of income	-	43	-
	22	(335)	69
Other comprehensive income (loss)	2,999	(14,263)	(5,708)
Total comprehensive income (loss)	22,985	(13,315)	4,655
Comprehensive income (loss) attributable to shareholders of Petrobras	22,961	(13,126)	4,469
Comprehensive income (loss) attributable to non-controlling interests	24	(189)	186

(*) It includes 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, 2021, 2020 and 2019 (Expressed in millions of US Dollars, unless otherwise indicated)

	Note	2021	2020	2019
Cash flows from operating activities				
Net income (loss) for the year		19,986	948	10,363
Adjustments for:				
Net income from discontinued operations		–	–	(2,560)
Pension and medical benefits (actuarial expense)	17	2,098	(1,001)	2,086
Results of equity-accounted investments	29.2	(1,607)	659	(153)
Depreciation, depletion and amortization		11,695	11,445	14,836
Impairment of assets (reversal)	25	(3,190)	7,339	2,848
Inventory write-down (write-back) to net realizable value	14	(1)	375	15
Allowance (reversals) for credit loss on trade and other receivables	13.3	(30)	144	87
Exploratory expenditure write-offs	26	248	456	308
Disposal/write-offs of assets, remeasurement of investment retained with loss of control		(1,900)	(456)	(6,012)
Foreign exchange, indexation and finance charges		10,795	11,094	8,460
Deferred income taxes, net	16.1	4,058	(1,743)	2,798
Revision and unwinding of discount on the provision for decommissioning costs	19	661	981	950
PIS and COFINS recovery - exclusion of ICMS (VAT tax) from the basis of calculation	16	(986)	(3,173)	–
Results from co-participation agreements in bid areas	24	(631)	–	–
Assumption of interest in concessions	24	(164)	–	–
Early termination and cash outflows revision of lease agreements		(545)	(276)	(60)
Decrease (Increase) in assets				
Trade and other receivables, net		(2,075)	1	2,233
Inventories		(2,334)	724	(281)
Judicial deposits		(1,032)	(859)	(2,144)
Escrow account - Class action agreement		–	–	1,819
Other assets		(289)	159	(219)
Increase (Decrease) in liabilities				
Trade payables		1,073	216	(989)
Other taxes payable		7,016	3,246	225
Pension and medical benefits		(2,239)	(1,048)	(1,882)
Provisions for legal proceedings		(12)	(261)	(3,767)
Short-term benefits		(312)	781	185
Provision for decommissioning costs		(730)	(482)	(512)
Agreement with US authorities		–	–	(768)
Other liabilities		376	(47)	(259)
Income taxes paid		(2,138)	(332)	(2,330)
Net cash provided by operating activities from continuing operations		37,791	28,890	25,277
Net cash provided by operating activities - discontinued operations		–	–	323
Net cash provided by operating activities		37,791	28,890	25,600
Cash flows from investing activities				
Acquisition of PP&E and intangible assets (*)		(6,325)	(5,874)	(8,556)
Bidding for oil surplus of Transfer of rights agreement		–	–	(15,341)
Investments in investees		(24)	(942)	(7)
Proceeds from disposal of assets - Divestment		4,783	1,997	10,413
Reimbursement on the Transfer of rights agreement		–	–	8,361
Financial compensation for the Búzios Co-participation Agreement	24	2,938	–	–
Divestment (Investment) in marketable securities		4	66	198
Dividends received		781	243	1,436
Net cash provided by (used in) investing activities from continuing operations		2,157	(4,510)	(3,496)
Net cash provided by investing activities - discontinued operations		–	–	1,812
Net cash provided by (used in) investing activities		2,157	(4,510)	(1,684)
Cash flows from financing activities				
Changes in non-controlling interest		(24)	(67)	(29)
Proceeds from financing	32.2	1,885	17,023	7,464
Repayment of principal - finance debt	32.2	(21,413)	(25,727)	(27,273)
Repayment of interest - finance debt	32.2	(2,229)	(3,157)	(4,501)
Repayment of lease liability	33	(5,827)	(5,880)	(5,207)
Dividends paid to Shareholders of Petrobras	34	(13,078)	(1,367)	(1,877)
Dividends paid to non-controlling interests		(105)	(84)	(138)
Net cash used in financing activities from continuing operations		(40,791)	(19,259)	(31,561)
Net cash used in financing activities - discontinued operations		–	–	(508)
Net cash used in financing activities		(40,791)	(19,259)	(32,069)
Effect of exchange rate changes on cash and cash equivalents		(402)	(773)	1,631
Net change in cash and cash equivalents		(1,245)	4,348	(6,522)
Cash and cash equivalents at the beginning of the period		11,725	7,377	13,899
Cash and cash equivalents at the end of the period		10,480	11,725	7,377

The notes form an integral part of these financial statements.

(*) In 2019, it does not include bidding for oil surplus of Transfer of rights agreement

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

PETROBRAS

Years ending December 31, 2021, 2020 and 2019 (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							
	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	Total consolidated equity
Balance at January 1, 2019	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 (loss)	-	-	-	(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)
Balance at December 31, 2019	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)
Balance at December 31, 2020	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
Capital increase with reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Capital transactions	-	-	79	-	-	-	-	-	-	-	-	-	-	79	(40)	39
Net income	-	-	-	-	-	-	-	-	-	-	-	-	19,875	19,875	111	19,986
Other comprehensive income (loss)	-	-	-	(1,186)	421	3,829	22	-	-	-	-	-	-	3,086	(87)	2,999
Appropriations:																
Additional dividends proposed last year approved this year	-	-	-	-	-	-	-	-	-	-	-	(1,128)	-	(1,128)	-	(1,128)
Transfer to reserves	-	-	-	-	-	-	-	956	184	118	388	-	(1,646)	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	(312)	6,688	(18,229)	(11,853)	(109)	(11,962)
Balance at December 31, 2021	107,380	(279)	1,143	(75,122)	(24,169)	(11,205)	(1,152)	9,769	3,084	1,220	52,050	6,688	-	69,407	405	69,812
	107,101		1,143				(111,648)					72,811	-	69,407	405	69,812

The notes form an integral part of these financial statements.

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PETROBRAS

(Expressed in millions of US Dollars, unless otherwise indicated)

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.

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 14,134/21 (oil and gas 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.

NOTES TO THE FINANCIAL STATEMENTS

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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 30, 2022.

2.2. Discontinued operation

After the conclusion of a secondary public offering in July 2019, the Company no longer controlled Petrobras Distribuidora S.A. – BR (later renamed to Vibra Energia).

As a result, this investment is classified as a discontinued operation for 2019, 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. 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.

Brazilian Real x U.S. Dollar	Dec/21	Sep/21	Jun/21	Mar/21	Dec/20	Sep/20	Jun/20	Mar/20	Dec/19	Sep/19	Jun/19	Mar/19
Quarterly average exchange rate	5.59	5.23	5.29	5.48	5.39	5.38	5.39	4.47	4.12	3.97	3.92	3.77
Period-end exchange rate	5.58	5.44	5.00	5.70	5.20	5.64	5.48	5.20	4.03	4.16	3.83	3.90

3. Significant accounting policies

To aid cohesion and comprehension, the significant accounting policies are set out at the end of each explanatory note to which they relate.

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.

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.

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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.

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 23 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 provides further information on impairment testing.

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(Expressed in millions of US Dollars, unless otherwise indicated)

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 and based on short-term estimates on a monthly basis. 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 or increase precipitously, industry prices over the long term tends to continue being driven by market supply and demand fundamentals.

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 – USDX).

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 Company's sales revenue and refining margins are directly impacted by Brent price variations, as well as Brazilian Real/U.S. dollar exchange rate variations, which also 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.

Reductions in future oil and natural gas price scenarios resulting from structural changes, adverse effects arising from significant changes in reserve volumes, production curve expectations, lifting costs or discount rates, as well as capital expenditure decisions that result in the postponement or termination of projects, could trigger the need for impairment assessment.

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 25.

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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, 2021, Exploration and Production CGUs in Brazil had 90 fields and 25 groups of fields. Changes in the aggregation of CGUs are presented in note 25.
- 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 such 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 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.

In 2021, management approved the sale of the Landulpho Alves (RLAM) and Isaac Sabbá (REMAN) refineries, whose assets were excluded from the CGU. The sale of RLAM was closed on November 30, 2021. The sale of REMAN is not yet closed, and its assets are classified as held for sale as of December 31, 2021 (see note 31.1).

ii) CGU Comperj: with the cancellation of the first refining unit of Comperj, the remaining assets were allocated into 2 CGUs: the CGU Itaboraí Utilities, composed of assets that will support the natural gas processing plant (UPGN) of the route 3 integrated project; and the CGU GasLub, a set of assets that remain in hibernation and are being evaluated for use in other projects.

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;

v) Hidrovia CGU: comprises the fleet of vessels under construction of the Hidrovia project (transportation of ethanol along the Tietê River);

vi) SIX CGU: shale processing plant (classified as held for sale, as described in note 31.1) ; and

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vii) Other operations abroad defined as the smallest group of assets that generates independent cash flows.

c) Gas & Power CGUs:

In 2021, the New Legal Framework for Gas (Law 14,134/21 and Decree nº 10,712/21) established significant regulatory changes applicable to the natural gas market in Brazil, allowing private companies to access certain assets that constituted the CGU Natural Gas. As a result, the assets that composed this CGU were reorganized as follows:

i) CGU Integrated Processing System: set of assets formed by natural gas processing plants in Itaboraí, Cabiúnas and Caraguatatuba, grouped together due to the contractual characteristics of the Integrated Processing System and the Integrated Transportation System; and

ii) CGUs of Natural Gas Processing Plants: remaining natural gas processing plants each of which represents a separate CGU.

The gas pipelines Route 2 and Route 3, which were also part of the Natural Gas CGU, are now tested with E&P assets that benefit from this infrastructure. In relation to the LNG terminals and the Brazil-Bolivia Gas Pipeline, impairment testing are made in conjunction with the Company's natural gas processing plants.

Other Gas & Power CGUs are:

iii) CGU nitrogen fertilizer plants: formed by nitrogen fertilizer plants;

iv) CGU Power: comprises the thermoelectric power generation plants (UTEs). In December 2021, occurred the closing of the sale of plants Arembepe, Muryci and Bahia 1 (see note 31), at which point these assets were excluded from the CGU.

v) CGU Termocamaçari: comprises the assets from the Termocamaçari thermoelectric plant;

vi) 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.

Further information on impairment testing is set out in note 25.

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:

- 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.

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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 17.

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 18 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 relate 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 19 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 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).

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Changes in deferred tax assets and liabilities are presented in note 16.1.

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 and, based on short-term estimates on a monthly basis. The highly probable future exports are determined by a percentage of projected exports revenue, 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. For the long-term, future exports forecasts are reviewed whenever the Company reviews its Strategic Plan assumptions, while for the short-term it is reviewed monthly. The approach for determining exports as highly probable future exports is reviewed annually, at least.

See note 36 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 21, 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, 2021, 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, mainly related to different interpretations of deductions and additions to the IRPJ and CSLL calculation basis. The Company evaluates each uncertain tax treatment separately or in a group where there is interdependence in relation to the expected result.

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. The tax risks identified are evaluated following a pre-determined tax risk management methodology.

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If it is probable that the tax authorities will accept an uncertain tax treatment, the amounts recorded in the financial statements are consistent with the tax records and, therefore, no uncertainty is reflected in the measurement of current or deferred income taxes. If it is not probable that the tax authorities will accept an uncertain tax treatment, the uncertainty is reflected in the measurement of income taxes in the financial statements.

Information on uncertainty over income tax treatments is disclosed in Note 16.1.

5. New standards and interpretations

5.1. New International Financial Reporting Standards not yet adopted

Standard	Description	Effective on
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, retrospective application with specific rules.
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 specific rules.
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, among other things, the requirements to be applied in the recognition, measurement, presentation and disclosure of insurance and reinsurance contracts.	January 1, 2023, retrospective application with specific rules.
Disclosure of Accounting Policies – Amendments to IAS 1 and Practice Statement 2	In place of the requirement to disclose significant accounting policies, the amendments to IAS 1 – Presentation of Financial Statements establish that accounting policies must be disclosed when they are material. Among other things, the amendment provides guidance for determining such materiality.	January 1, 2023, prospective application to amendments to IAS 1.
Definition of Accounting Estimates – Amendments to IAS 8	According to the amendments to IAS 8, the definition of "change in accounting estimate" no longer exists. Instead, a definition was established for the term "accounting estimates": monetary values in the financial statements that are subject to measurement uncertainty.	January 1, 2023, prospective application.
Deferred Tax related to Assets and Liabilities arising from a Single Transaction – Amendments to IAS 12	The amendments have reduced the scope of the exemption from recognition of deferred tax assets and deferred tax liabilities described in paragraphs 15 and 24 of IAS 12 – Income Taxes, so that it no longer applies to transactions that, among other things, on initial recognition, give rise to equal taxable and deductible temporary differences.	January 1, 2023, retrospective application with specific rules.

Regarding the amendments effective as of January 1, 2022, according to the assessment made, the Company estimates that there will be no significant impact with the initial application on its consolidated financial statements.

As for the amendments that will be effective as of January 1, 2023, the Company is assessing the impacts that they will have on the financial statements and is unable to make a reasonable estimation of these impacts at this stage.

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6. 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 financial strategy of the 2022-2026 Strategic Plan is based on maintaining an optimal capital structure, maximizing value creation, mitigating risks through litigation management and improving capital allocation.

The Company's goal of reducing gross debt (composed of current and non-current finance debt and lease liability) to US\$ 60 billion by 2022 was met in September 2021, which, in accordance with the Shareholders Dividends Policy, allows the distribution to its shareholders of 60% of the difference between net cash provided by operating activities and acquisition of PP&E and intangibles assets.

As of December 31, 2021, gross debt decreased to US\$ 58,743, from US\$ 75,538 as of December 31, 2020, and the weighted average maturity of outstanding debt increased to 13.39 years as of December 31, 2021 (from 11.71 years as of December 31, 2020).

7. Cash and cash equivalents and Marketable securities

7.1. Cash and cash equivalents

	12.31.2021	12.31.2020
Cash at bank and in hand	299	552
Short-term financial investments		
- In Brazil		
Brazilian interbank deposit rate investment funds and other short-term deposits	1,951	2,592
Other investment funds	163	28
	2,114	2,620
- Abroad		
Time deposits	4,310	2,574
Automatic investing accounts and interest checking accounts	3,732	5,633
Other financial investments	12	332
	8,054	8,539
Total short-term financial investments	10,168	11,159
Total cash and cash equivalents	10,467	11,711

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.

7.1.1. 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.

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7.2. Marketable securities

	12.31.2021			12.31.2020		
	In Brazil	Abroad	Total	In Brazil	Abroad	Total
Fair value through profit or loss	650	-	650	652	-	652
Amortized cost	44	-	44	44	7	51
Total	694	-	694	696	7	703
Current	650	-	650	652	7	659
Non-current	44	-	44	44	-	44

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.

7.2.1. 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 only 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 profit or loss: all other marketable securities.

8. Sales revenues

8.1. 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 12.

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, which 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 transaction 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\$ 38 (US\$ 37 in 2020).

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8.2. Net sales revenues

	2021	2020	2019
Diesel	24,236	13,924	23,007
Gasoline	11,910	6,313	9,810
Liquefied petroleum gas	4,491	3,383	4,159
Jet fuel	2,271	1,455	3,832
Naphtha	1,699	1,694	1,669
Fuel oil (including bunker fuel)	1,775	795	1,026
Other oil products	4,261	2,712	3,410
Subtotal oil products	50,643	30,276	46,913
Natural gas	5,884	3,649	5,929
Oil	671	48	-
Renewables and nitrogen products	40	59	245
Breakage	243	438	645
Electricity	2,902	1,109	1,322
Services, agency and others	808	755	940
Domestic market	61,191	36,334	55,994
Exports	21,491	15,945	18,085
Oil	14,942	11,720	13,180
Fuel oil (including bunker fuel)	5,480	3,525	3,321
Other oil products	1,069	700	1,584
Sales abroad (*)	1,284	1,404	2,510
Foreign market	22,775	17,349	20,595
Sales revenues (**)	83,966	53,683	76,589

(*) Sales revenues from operations outside of Brazil, including trading and excluding exports.

(**) Sales revenues by business segment are set out in note 8.

In 2021, sales to Vibra Energia (formerly BR Distribuidora) represent more than 10% of the Company's sales revenues, mainly associated with the refining, transportation and marketing segment.

8.3. 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, 2021 presented below are based on the contractually agreed future sales volumes, as well as prices prevailing at December 31, 2021 or practiced in recent sales reflecting more directly observable information:

	Expected recognition within 1 year	Expected recognition after 1 year	Total
Domestic market			
Gasoline	9,964	-	9,964
Diesel	20,531	-	20,531
Natural gas	11,809	11,768	23,577
Services and others	6,173	8,743	14,916
Naphtha	1,751	5,254	7,005
Electricity	624	2,163	2,787
Other oil products	25	-	25
Jet fuel	910	-	910
Foreign market			
Exports	2,930	11,592	14,522
Total	54,717	39,520	94,237

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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.

8.4. Contract liabilities

The balance of contract liabilities carried on the statement of financial position at December 31, 2021 amounted to US\$ 19 (US\$ 69 as of December 31, 2020). 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.

8.5. 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: (i) goods or services (or a bundle of goods or services) that are distinct, and (ii) a series of distinct goods or services that have the same characteristics or are substantially the same and that have the same pattern of transfer to the customer.

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.

9. Costs and expenses by nature

9.1. Cost of sales

	2021	2020	2019
Raw material, products for resale, materials and third-party services (*)	(20,869)	(12,699)	(20,694)
Depreciation, depletion and amortization	(9,277)	(8,847)	(12,036)
Production taxes	(11,136)	(5,920)	(9,741)
Employee compensation	(1,882)	(1,729)	(3,261)
Total	(43,164)	(29,195)	(45,732)

(*) It includes short-term leases and inventory turnover.

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9.2. Selling expenses

	2021	2020	2019
Materials, third-party services, freight, rent and other related costs	(3,542)	(4,163)	(3,664)
Depreciation, depletion and amortization	(610)	(564)	(549)
Allowance for expected credit losses	12	2	(49)
Employee compensation	(89)	(159)	(214)
Total	(4,229)	(4,884)	(4,476)

9.3. General and administrative expenses

	2021	2020	2019
Employee compensation	(834)	(749)	(1,427)
Materials, third-party services, rent and other related costs	(256)	(252)	(539)
Depreciation, depletion and amortization	(86)	(89)	(158)
Total	(1,176)	(1,090)	(2,124)

10. Other income and expenses

	2021	2020	2019
Pension and medical benefits - retirees	(1,467)	889	(1,371)
Unscheduled stoppages and pre-operating expenses	(1,362)	(1,441)	(1,321)
Losses with legal, administrative and arbitration proceedings	(740)	(493)	(1,520)
Performance award program	(469)	(439)	(643)
Profit sharing	(125)	(7)	(43)
Gains/(losses) with commodities derivatives	(79)	(308)	(370)
Equalization of expenses - Production Individualization Agreements	(74)	701	2
Reclassification of comprehensive income (loss) due to the disposal of equity-accounted investments	(41)	(43)	(34)
Results on disposal/write-offs of assets and on remeasurement of investment retained with loss of control	1,941	499	6,046
Results from co-participation agreements in bid areas (*)	631	-	-
Recovery of taxes (**)	561	1,580	99
Early termination and changes to cash flow estimates of leases	545	276	60
Reimbursements from E&P partnership operations	485	912	480
Assumption of interest in concession agreements (*)	363	84	-
Amounts recovered from Lava Jato investigation	235	155	220
Fines imposed on suppliers	163	95	260
Gains / (losses) on decommissioning of returned/abandoned areas	99	(342)	(155)
Voluntary severance programs - PDV	11	(1,017)	(198)
Others	(24)	(103)	(313)
Total	653	998	1,199

(*) Further information in note 24.

(**) It includes the effects of the exclusion of ICMS (VAT tax) from the basis of calculation of sales taxes PIS and COFINS, except for the effects of inflation indexation, as set out in note 16.

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11. Net finance income (expense)

	2021	2020	2019
Finance income	821	551	1,330
Income from investments and marketable securities (Government Bonds)	315	202	558
Other income, net	506	349	772
Finance expenses	(5,150)	(6,004)	(7,086)
Interest on finance debt	(2,870)	(3,595)	(4,847)
Unwinding of discount on lease liabilities	(1,220)	(1,322)	(1,514)
Discount and premium on repurchase of debt securities	(1,102)	(1,157)	(860)
Capitalized borrowing costs	976	941	1,332
Unwinding of discount on the provision for decommissioning costs	(761)	(638)	(795)
Other finance expenses and income, net	(173)	(233)	(402)
Foreign exchange gains (losses) and indexation charges	(6,637)	(4,177)	(3,008)
Foreign exchange gains (losses) (*)	(2,737)	(1,363)	(72)
Reclassification of hedge accounting to the Statement of Income (*)	(4,585)	(4,720)	(3,136)
Recoverable taxes inflation indexation income (**)	518	1,807	125
Other foreign exchange gains (losses) and indexation charges, net	167	99	75
Total	(10,966)	(9,630)	(8,764)

(*) For more information, see notes 36.3c and 36.3a.

(**) Includes PIS and Cofins inflation indexation income – exclusion of ICMS (VAT tax) from the basis of calculation. See note 16.

12. Net income by operating segment

Consolidated Statement of Income by operating segment

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Eliminations	2021 Total
Sales revenues	55,584	74,524	12,051	504	(58,697)	83,966
Intersegments	54,479	1,416	2,564	238	(58,697)	–
Third parties	1,105	73,108	9,487	266	–	83,966
Cost of sales	(23,673)	(65,620)	(9,494)	(503)	56,126	(43,164)
Gross profit (loss)	31,911	8,904	2,557	1	(2,571)	40,802
Income (expenses)	3,283	(1,621)	(2,871)	(1,987)	(22)	(3,218)
Selling	–	(1,543)	(2,653)	(11)	(22)	(4,229)
General and administrative	(152)	(148)	(73)	(803)	–	(1,176)
Exploration costs	(687)	–	–	–	–	(687)
Research and development	(415)	(11)	(25)	(112)	–	(563)
Other taxes	(192)	(122)	(38)	(54)	–	(406)
Impairment of assets	3,107	289	(208)	2	–	3,190
Other income and expenses	1,622	(86)	126	(1,009)	–	653
Income (loss) before net finance income (expense), results of equity-accounted investments and income taxes	35,194	7,283	(314)	(1,986)	(2,593)	37,584
Net finance income (expense)	–	–	–	(10,966)	–	(10,966)
Results in equity-accounted investments	119	941	98	449	–	1,607
Net income / (loss) before income taxes	35,313	8,224	(216)	(12,503)	(2,593)	28,225
Income taxes	(11,963)	(2,478)	107	5,212	883	(8,239)
Net income (loss) for the year	23,350	5,746	(109)	(7,291)	(1,710)	19,986
Attributable to:						
Shareholders of Petrobras	23,353	5,746	(206)	(7,308)	(1,710)	19,875
Non-controlling interests	(3)	–	97	17	–	111

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					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
Income (loss) before net finance income (expense), results of equity-accounted investments and income taxes	7,050	779	1,159	463	612	10,063
Net finance income (expense)	-	-	-	(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
Net income (loss) for the year	4,471	77	894	(4,898)	404	948
Attributable to:						
Shareholders of Petrobras	4,475	111	821	(4,670)	404	1,141
Non-controlling interests	(4)	(34)	73	(228)	-	(193)

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					2019	
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Eliminations	Total
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
Income (loss) before net finance income (expense), results of equity-accounted investments 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)
Net income from continuing operations for the year	12,612	923	4,301	(8,632)	(1,401)	7,803
Net income from discontinued operations for the year	-	-	3	2,557	-	2,560
Net income for the year	12,612	923	4,304	(6,075)	(1,401)	10,363
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

In the year ended December 31, 2019, the consolidated amounts of intersegment sales (remaining after eliminations) relate to sales from the Refining, Transportation & Marketing to BR, which is presented as discontinued operation, in 2019, within Corporate and other business.

12.1. 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) in 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:

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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 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 to the distribution business 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 (G&P): 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 the RT&M segment. 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 the 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. The distribution businesses reflect the equity interest in the associate Vibra Energia, formerly Petrobras Distribuidora, until July 2021, when the Company sold its remaining interest in this associate, and oil products distribution businesses abroad (South America). The biofuels business reflects the activities of producing biodiesel, and its co-products and ethanol.

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13. Trade and other receivables

13.1. Trade and other receivables

	12.31.2021	12.31.2020
Receivables from contracts with customers		
Third parties	4,839	3,081
Related parties		
Investees (note 30.5)	385	664
Receivables from the electricity sector	-	205
Subtotal	5,224	3,950
Other trade receivables		
Third parties		
Receivables from divestments (*)	2,679	1,523
Lease receivables	435	467
Other receivables (**)	872	2,536
Related parties		
Petroleum and alcohol accounts - receivables from Brazilian Government	506	482
Subtotal	4,492	5,008
Total trade and other receivables, before ECL	9,716	8,958
Expected credit losses (ECL) - Third parties	(1,428)	(1,528)
Expected credit losses (ECL) - Related parties	(20)	(68)
Total trade and other receivables	8,268	7,362
Current	6,368	4,731
Non-current	1,900	2,631

(*) It mainly refers to receivables (including interest, exchange rate variation and inflation indexation) from the divestment in Nova Transportadora do Sudeste (NTS), of Block BM-S-8 in the Bacalhau field (former Carcará group), in addition to the values referring to Rio Ventura, Roncador, Pampo Enchova, Baúna and Miranga fields.

(**) As of December 31, 2020, it mainly includes amounts related to the purchase and sale of production platforms and equipment from our partners in E&P consortia, with financial settlement in the first quarter of 2021.

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\$ 1,155 as of December 31, 2021 (US\$ 507 as of December 31, 2020).

In 2021, constitutional amendments changed the form of payment of judicialized debts by the Brazilian Federal Government (*precatórios*), establishing that there will be a limit for yearly payments until the end of 2026, including budgetary limitations. For that reason, the Company expects to receive the amounts of Petroleum and Alcohol Accounts between 2022 and 2027, depending on the yearly budgetary limitations of the Brazilian Federal Government.

13.2. Aging of trade and other receivables – third parties

	12.31.2021	12.31.2020		
	Trade and other receivables	Expected credit losses	Trade and other receivables	Expected credit losses
Current	7,059	(77)	5,850	(130)
Overdue:				
1-90 days	218	(26)	205	(8)
91-180 days	40	(6)	15	(9)
181-365 days	51	(29)	42	(28)
More than 365 days	1,457	(1,290)	1,495	(1,353)
Total	8,825	(1,428)	7,607	(1,528)

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13.3. Changes in provision for expected credit losses

	31.12.2021	31.12.2020
Opening balance	1,596	2,331
Additions	69	209
Write-offs	(40)	(667)
Reversals	(112)	(31)
Transfer of assets held for sale	(8)	(3)
Cumulative translation adjustment	(57)	(243)
Closing balance	1,448	1,596
Current	158	218
Non-current	1,290	1,378

In 2020, the write-offs are primarily related to the write-off of receivables from suppliers, relating to the construction and renovation of platforms.

Agreement with Companhia de Eletricidade do Amapá

On May 11, 2021, Petrobras signed with Companhia de Eletricidade do Amapá (CEA) a legal agreement for the termination of litigation and credit recovery in the amount of US\$ 58 (R\$ 314 million). The agreement establishes the payment of US\$ 24 (R\$ 133 million) to Petrobras, to be settled in 24 monthly installments. A discount will be granted on the remaining US\$ 34 (R\$ 181 million), provided that the payments occur on time. In case of default, as provided for in the agreement, Petrobras may demand the outstanding debt without discount.

The suspensive conditions of the contract were fulfilled in November 2021 with the transfer of control to Equatorial Energia. Thus, the Company recognized this receivable, with a gain in the statement of income of US\$ 24, before taxes.

13.4. Accounting policy for trade and other receivables

Trade and other 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 (ECL) for short-term trade receivables using a provision matrix which is 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 ECL of other trade receivables based on their 12-month expected credit losses unless their credit risk increases significantly since their initial recognition, in which case the allowance is based on their lifetime ECL.

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.

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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 ECL 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.

14. Inventories

	12.31.2021	12.31.2020
Crude oil	3,048	2,242
Oil products	2,495	1,925
Intermediate products	532	396
Natural gas and Liquefied Natural Gas (LNG)	349	122
Biofuels	19	30
Fertilizers	8	8
Total products	6,451	4,723
Materials, supplies and others	804	954
Total	7,255	5,677

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.

In the year ended December 31, 2021, the Company recognized a US\$ 1 gain within cost of sales, adjusting inventories to net realizable value (a US\$ 375 loss within cost of sales in the year ended December 31, 2020) primarily due to changes in international prices of crude oil and oil products.

At December 31, 2021, 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, amounting to US\$ 2,384, considering the prepayments made in January 2021.

14.1. 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.

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15. Trade payables

	12.31.2021	12.31.2020
Third parties in Brazil	3,556	2,828
Third parties abroad	1,861	3,603
Related parties	66	428
Total in current liabilities	5,483	6,859

16. Taxes

16.1. Income taxes

Income taxes

	Current assets		Current liabilities		Non-current liabilities	
	12.31.2021	12.31.2020	12.31.2021	12.31.2020	12.31.2021	12.31.2020
Taxes in Brazil						
Income taxes	133	391	682	111	-	-
Income taxes - Tax settlement programs	-	-	43	45	300	357
	133	391	725	156	300	357
Taxes abroad	30	27	8	42	-	-
Total	163	418	733	198	300	357

(*) See note 20.2 for detailed information.

Income taxes credits refer mainly to tax credits resulting from the monthly process for estimation and payment of income taxes, in addition to the negative balance of IRPJ and CSLL related to 2017, 2018, 2019 and 2021. Income taxes within current liabilities refer to the current portion of IRPJ and CSLL to be paid.

Tax settlement programs amounts relate mainly to a notice of deficiency issued by the Brazilian Federal Revenue Service due to the treatment of expenses arising from the Terms of Financial Commitment (TFC) as deductible in determining taxable profit for the calculation of income taxes. The payment term is 145 monthly installments, indexed by the Selic interest rate, as of January 2018.

16.1.1. 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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	2021	2020	2019
Net income before income taxes	28,225	(226)	12,003
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	(9,597)	77	(4,081)
Tax benefits from the deduction of interest on capital distribution	843	(16)	728
Different jurisdictional tax rates for companies abroad	296	1,874	1,056
Brazilian income taxes on income of companies incorporated outside Brazil (*)	(546)	(743)	(175)
Tax incentives	50	(9)	443
Tax loss carryforwards (unrecognized tax losses)	59	(428)	(682)
Non-taxable income (non-deductible expenses), net (**)	234	(280)	(1,556)
Post-employment benefits (***)	(802)	559	(417)
Results of equity-accounted investments in Brazil and abroad	318	49	53
Non-incidence of income taxes on indexation charges (SELIC interest rate) over undue paid taxes	903	-	-
Others	3	91	431
Income taxes	(8,239)	1,174	(4,200)
Deferred income taxes	(4,058)	1,743	(2,798)
Current income taxes	(4,181)	(569)	(1,402)
Effective tax rate of income taxes	(29)%	(519)%	(35)%

(*) 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.

(***) It is impacted by non-deductible expenses for health care and pension plans in 2021, compared to the non-taxable gain from the health care plan revision occurred in 2020.

16.1.2. Deferred income taxes - non-current

The changes in the deferred income taxes are presented as follows:

	2021	2020
Balance at January 1	6,256	(372)
Recognized in the statement of income for the period	(4,058)	1,743
Recognized in shareholders' equity	(1,555)	5,564
Cumulative translation adjustment	(124)	(623)
Use of tax loss carryforwards	(1,172)	(60)
Others	37	4
Balance at December 31,	(625)	6,256
Deferred tax assets	604	6,451
Deferred tax liabilities	(1,229)	(195)

The composition of deferred tax assets and liabilities is set out in the following table:

Nature	Realization basis	12.31.2021	12.31.2020
PP&E - Exploration and decommissioning costs	Depreciation, amortization and write-offs of assets	(1,362)	(3,205)
PP&E - Impairment	Amortization, impairment reversals and write-offs of assets	4,382	6,626
PP&E - Others (*)	Depreciation, amortization and write-offs of assets	(12,924)	(8,690)
Loans, trade and other receivables / payables and financing	Payments, receipts and considerations	3,490	3,913
Finance leases	Appropriation of the considerations	1,244	1,190
Provision for legal proceedings	Payments and use of provisions	605	664
Tax loss carryforwards	30% of taxable income compensation	1,827	2,501
Inventories	Sales, write-downs and losses	228	158
Employee Benefits	Payments and use of provisions	1,250	2,882
Others		635	217
Total		(625)	6,256

(*) It includes accelerated depreciation, difference between units of production method and straight line method, as well as capitalized borrowing

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Non-incidence of income taxes on indexation (SELIC interest rate) of undue paid taxes

On September 24, 2021, the Supreme Federal Court (*Supremo Tribunal Federal – STF*), in a judgment of extraordinary appeal with general repercussion, without final decision, decided that the incidence of income taxes (IRPJ and CSLL) on the indexation income from applying SELIC interest rate (indexation charges and default interest) over undue paid taxes is unconstitutional.

The Company has a writ of mandamus in which it claims the right to recover the amounts of IRPJ and CSLL charged on the income arising from the indexation of undue paid taxes and judicial deposits by the SELIC rate since March 2015, as well as the definitive removal of this income from the IRPJ and CSLL tax base.

On October 20, 2021, a judicial decision was published in the writ of mandamus recognizing the right of the Company to the non-incidence of income taxes on indexation by the SELIC rate of undue paid taxes.

Based on the STF's decision, as well as on the legal grounds presented, Petrobras reassessed the expectation for this matter, considering that it is probable that this tax treatment will be accepted.

Thus, in 2021, a US\$ 903 gain was recognized in the income statement, within income taxes, arising from:

- (i) a US\$ 266 increase in recoverable income taxes, within non-current assets, relating to periods when the Company recorded taxable income;
- (ii) a US\$ 611 decrease in deferred income taxes, within non-current liabilities, relating to periods when the Company recorded tax losses; and
- (iii) a US\$ 26 loss within cumulative translation adjustments.

16.1.3. 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 2022-2026 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 2022-2026 Strategic Plan.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) as of December 31, 2021 is set out in the following table:

	Assets	Liabilities
2022	59	(2,403)
2023	177	(881)
2024	19	92
2025	18	265
2026	16	(4,513)
2027 and thereafter	315	8,669
Recognized deferred tax assets	604	1,229

In addition, at December 31, 2021, the Company has tax loss carryforwards arising from offshore subsidiaries, for which no deferred taxes were recognized.

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	Assets	Liabilities
Brazil	1	-
Abroad	1,351	-
Unrecognized deferred tax assets	1,352	-
Total	1,956	1,229

These tax losses arise mainly from oil and gas exploration and production and refining activities in the United States.

An aging of the unrecognized deferred tax assets from companies abroad is set out below:

	2027 - 2029	2030 - 2032	2033 - 2035	2036 - 2038	Undefined expiration	Total
Unrecognized deferred tax assets	410	571	303	-	67	1,351

Uncertain tax treatments

As of December 31, 2021, the Company had US\$ 4,983 (US\$ 4,900 as of December 31, 2020) of uncertain tax treatments for IRPJ and CSLL related to judicial and administrative proceedings (see note 18.3). Additionally, as of December 31, 2021, the Company has other positions that can be considered as uncertain tax treatments for IRPJ and CSLL amounting to US\$ 10,712 (US\$ 7,908 as of December 31, 2020), given the possibility of different interpretation by the tax authority. These uncertain tax treatments are supported by technical assessments and tax risk assessment methodology. Therefore, Petrobras understands that such positions will be accepted by the tax authorities.

16.1.4. 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.

The calculations of these taxes are 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.

Income taxes expenses on profits arising from subsidiaries abroad are accounted for in the statement of income using the same income tax rates as used in Brazil, adjusted by dividends and results of equity-accounted investments.

a) 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.

b) 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

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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.

16.2. Other taxes

Other taxes

	Current assets				Non-current assets		Current liabilities		Non-current liabilities	
	12.31.2021	12.31.2020	12.31.2021	12.31.2020	12.31.2021	12.31.2020	12.31.2021	12.31.2020	(*)	
Taxes in Brazil										
Current / Non-current ICMS (VAT)	665	507	379	293	995	642	-	-		
Current / Non-current PIS and COFINS (**)	418	1,570	2,030	2,055	499	544	45	37		
Claim to recover PIS and COFINS	-	-	594	681	-	-	-	-		
CIDE	6	4	-	-	42	41	-	-		
Production taxes	-	-	-	-	2,147	1,173	21	94		
Withholding income taxes	-	-	-	-	86	106	-	-		
Tax Settlement Program	-	-	-	-	67	-	6	-		
Others	48	87	249	119	142	117	70	275		
Total in Brazil	1,137	2,168	3,252	3,148	3,978	2,623	142	406		
Taxes abroad	46	9	9	10	23	13	-	-		
Total	1,183	2,177	3,261	3,158	4,001	2,636	142	406		

(*) Other non-current taxes are classified as other non-current liabilities.

(**) It includes US\$ 104 (US\$ 1,230 as of December 31, 2020) related to exclusion of ICMS (VAT tax) in the basis of calculation of sales taxes PIS and COFINS (contributions for the social security).

Current and non-current ICMS (VAT) credits arise from requests for extemporaneous and overpaid tax, offset in accordance with the legislation of each state. 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.

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. Following this decision, the amounts overpaid in the period from October 2001 to August 2020 were calculated by excluding the ICMS effectively paid from the basis of calculation of PIS and COFINS, and the Company recognized US\$ 3,226 as other recoverable taxes.

The Company recognized this asset since the economic benefits for Petrobras was virtually certain, given that: (i) the final and unappealable decision in 2020 constitutes a right that ceased to be contingent on the date of that decision; and (ii) the measurement methodology adopted is uncontroversial as it is the one accepted by the Brazilian Federal Revenue Service

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On May 14, 2021, the Supreme Federal Court (STF) determined that the ICMS amount to be excluded from the calculation basis of PIS and COFINS are the amounts reported in the invoices, which were higher than the amounts effectively collected. Thus, an additional credit of US\$ 890 was recognized as other recoverable taxes.

The net gain in income in 2021 was US\$ 542 (US\$ 2,050 in 2020).

At December 31, 2021, the Company had already used US\$ 910 (US\$ 1,857 in 2020) in lieu of payment of other federal taxes.

As of December 31, 2021, the remaining balance for compensation relating to the exclusion of ICMS from the basis of calculation of PIS and COFINS, indexed to the SELIC rate, is US\$ 104 classified as other recoverable taxes.

Nature	Effects in the Financial Statements	2021	2020
Recovery of taxes	Other income and expenses	507	1,516
Inflation indexation	Foreign exchange gains (losses) and inflation indexation	479	1,709
Translation effects	Cumulative translation adjustments	(96)	-
Exclusion of ICMS from basis of calculation of PIS/COFINS	Credit in other recoverable taxes	890	3,226
Pis and Cofins	Other taxes	(20)	(78)
Tax effects (*)	Income taxes	(328)	(1,097)
Net effects	Statement of income	542	2,050

(*) A portion of the inflation indexation credit was recovered with the decision of the STF, as described in note 16.1.2.

Recovery of PIS and COFINS

The Company filed civil lawsuits, in the Regional Federal Court of the Second Region, 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. These proceedings are in settlement phase, and until this moment solely the undisputed portion of one of the lawsuits has been effectively received.

As of December 31, 2021, the Company had non-current receivables of US\$ 594 (US\$ 681 as of December 31, 2020) related to PIS and COFINS, which are indexed to inflation.

16.3. Tax amnesty programs – State Tax

As part of its on-going process of litigation management, in 2021, Petrobras adhered to tax amnesty programs of the states of Rio de Janeiro, Bahia Rio Grande do Sul, generating a US\$ 187 gain (a US\$ 209 gain, a US\$ 21 loss and a US\$ 1 loss for each state, respectively), arising from the reversal of part of the related provisions, of which a US\$ 147 gain as other income and expenses, and a US\$ 40 gain as finance income.

The main state amnesty programs to which the Company has adhered are the following:

State of Rio de Janeiro

The State of Rio de Janeiro created a tax debt settlement program called PEP-ICMS, under the terms of state law 189/2020 (extended through state law 191/2021) which allowed a 90% reduction of amounts due as a fine and interest.

By adhering to the program, the Company settled US\$ 322 of ICMS disputes disbursing US\$ 125 during 2021, of which US\$ 97 relates to disputes involving tax credits due to the cancellation of a plant of Gaslub (former Comperj) and US\$ 27 relates to payment of tax notices regarding ancillary obligations, misapplication of ICMS credit, as well as self-denunciation related to the ICMS calculation process.

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As a result, the Company recognized a US\$ 209 gain due to the reversal of the provisions.

State of Bahia

The adhesion to the amnesty program with the state of Bahia, entered into under the terms of state law 14,286/2020, allowed a 50% reduction of the debt and a 90% reduction of fines and interest. The tax debts, arisen from the disallowance of tax credits, were settled in the amount of US\$ 21, in 2021.

17. Employee benefits

Employee benefits are all forms of consideration given by an entity in exchange for service rendered by employees or for the termination of employment. It also includes expenses with directors and management. Such benefits include salaries, post-employment benefits, termination benefits and other benefits.

	12.31.2021	12.31.2020
Liabilities		
Short-term employee benefits	1,290	1,200
Termination benefits	348	900
Post-retirement benefits	9,880	16,069
Total	11,518	18,169
Current	2,144	3,502
Non-current	9,374	14,667

17.1. Short-term benefits

Short-term benefits are expected to be settled wholly before twelve months after the end of the annual reporting period in which the employees render the related service.

	12.31.2021	12.31.2020
Variable compensation program - PPP	461	522
Accrued vacation	440	470
Salaries and related charges and other provisions	270	204
Profit sharing	118	5
Total	1,289	1,201
Current	1,286	1,199
Non-current (*)	3	2

(*) Remaining balance relating to the four-year deferral of 40% of the PPP portion of executive managers.

In 2021, 2020 and 2019, the Company recognized the following amounts in the statement of income:

	2021	2020	2019
Salaries, accrued vacations and related charges	(2,665)	(3,064)	(4,313)
Variable compensation program - PPP	(469)	(439)	(643)
Profit sharing	(125)	(7)	(43)
Management fees and charges	(15)	(14)	(21)
Total	(3,274)	(3,524)	(5,020)

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17.1.1. Variable compensation programs

Performance award program (PPP)

On September 17, 2021, the Company's Board of Directors approved changes in the criteria for granting PPP 2021 to employees (in relation to the criteria previously approved by the Company's Board of Directors on December 16, 2020). The criteria for this variable compensation program establish that, in order to trigger this payment, it is necessary to have net income for the year and declaration and payment of distribution to shareholders, associated with the achievement of the Company's performance metrics and the individual performance of employees.

Profit Sharing (PLR)

At December 29, 2020, the 17 unions representing onshore employees of the Parent Company had signed the agreement for the PLR for 2021 and 2022, 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 with individual limits according to their remuneration.

In order for the PLR to be paid in 2021 and 2022, the following requirements must be met: (i) dividend distribution to shareholders approved at the Annual General Shareholders Meeting, (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 5% of Adjusted EBITDA (a non-GAAP measure defined as net income plus net finance income (expense), income taxes, depreciation, depletion and amortization, results in equity-accounted investments, impairment, cumulative foreign exchange adjustments reclassified to the income statement, results from disposal and write-offs of assets, foreign exchange gains and losses resulting from provisions for legal proceedings denominated in foreign currencies and results from the compensation of investments in bid areas), to 6.25% of net income and to 25% of dividends distributed to shareholders, in each year, whichever is lower.

Accounting policy for variable compensation programs (PPP and PLR)

The provision for variable compensation programs is recognized on an accrual basis and represents the estimate of future disbursements arising from past events, based on the criteria and metrics of the PPP and PLR, provided that the requirements for activating these programs are met.

17.2. Termination benefits

Termination benefits are employee benefits provided in exchange for the termination of labor contract as a result of either: i) an entity's decision to terminate the labor contract before the employee's normal retirement date; or ii) an employee's decision to accept an offer of benefits in exchange for the termination of their employment.

The Company has voluntary severance programs (PDV), specific for employees of the corporate segment and of divestment assets, which provide for the same legal and indemnity advantages, whose enrollment deadlines have already closed, totaling 11,418 adhesions accumulated until December 31, 2021 (11,117 until December 31, 2020).

Recognition of the provision for expenses occur as employees enroll to the programs.

During January 2021, the Company reopened the voluntary termination program for retired employees under the Brazilian Social Security Institute (INSS) before the enactment of the pension reform, for employees not yet enrolled or who have canceled enrollment for any reason until December 29, 2020, when 195 employees enrolled in this program.

The Company will disburse the severance payments in two installments, one at the time of termination and the remainder one year after the termination.

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Changes in the provision for expenses relating to voluntary severance programs are set out as follows:

	12.31.2021	12.31.2020
Opening Balance	900	140
Effects in the statement of income	(11)	1,017
Enrollments	30	1,076
Revision of provisions	(41)	(59)
Effects in cash and cash equivalents	(497)	(245)
Separations in the period	(497)	(245)
Cumulative translation adjustment	(43)	(12)
Closing Balance	349	900
Current	207	754
Non-current	142	146

As of December 31, 2021, from the balance of US\$ 349, US\$ 156 refers to the second installment of 2,607 retired employees and US\$ 193 refers to 1,961 employees enrolled in voluntary severance programs with expected termination by December 2024.

17.3. Employee benefits (post-employment)

The Company maintains a health care plan for its employees in Brazil (active and retiree) and their dependents (Saúde Petrobras), and five other major types of post-retirement pension benefits (collectively referred to as "pension plans").

	12.31.2021	12.31.2020
Liabilities		
Health Care Plan	4,485	5,356
Petros Pension Plan - Renegotiated (PPSP-R) (*)	3,233	6,016
Petros Pension Plan - Non-renegotiated (PPSP-NR) (*)	658	1,621
Petros Pension Plan - Renegotiated - Pre-70 (PPSP-R Pré 70)	817	1,508
Petros Pension Plan - Non-renegotiated - Pre-70 (PPSP-NR Pré 70)	511	1,075
Petros 2 Pension Plan (PP-2)	165	477
Other plans	11	16
Total	9,880	16,069
Current	651	1,549
Non-current	9,229	14,520

(*) In 2020, it includes obligations with contribution for the revision of the lump sum death benefit.

17.3.1. Nature and risks associated with defined benefit plans

Health Care Plan

The health care plan is managed by Petrobras Health Association (*Associação Petrobras de Saúde – APS*), a nonprofit civil association, and includes prevention and health care programs. The plan covers all employees and retirees, and is open to future employees.

Currently sponsored by Petrobras, Transpetro, PBIO, TBG and Termobahia, this plan is primarily exposed to the risk of an increase in medical costs due to inflation, new technologies, new types of coverage and an increase in the utilization 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.

Employees and retirees make monthly fixed contributions to cover high-risk procedures and variable contributions for a portion of the cost of 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 employees and retirees.

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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 (ACT), as follows:

- Until 2020, this benefit was covered 70% by the Company and 30% by the participants;
- As from January 2021, this benefit is covered 60% by the Company and 40% by participants.

Intermediate revision of the health care plan

On September 30, 2021, the Brazilian Federal Senate approved the Legislative Decree No. 26/2021, suspending the effects of CGPAR Resolution No. 23/2018, which had established parity contribution (50%-50%) for the coverage of costs between state-owned companies and employees.

On December 31, 2020, the Company had carried out a remeasurement of the actuarial liabilities of this plan to reflect the provisions of the CGPAR Resolution, in force at that time. However, with the suspension of this resolution, in September 2021, the Company carried out an intermediate remeasurement of the actuarial liabilities of this plan, to reflect the costing ratio for 2022 onwards, to be covered 60% by the Company and 40% by the participants, as provided for in the Collective Labor Agreement (ACT) for 2020-2022, which resulted in a US\$ 852 expense recognized within the income statement, due to the change in the benefit costing (past service cost), and a US\$ 1,176 gain within other comprehensive income, due to the revision of actuarial assumptions.

Annual revision of the health care plan

At December 31, 2021, this obligation was revised using the actuarial assumptions in force, which results are shown in note 17.5.2.

Pension plans

The Company's post-retirement plans are managed by Petros Foundation (*Fundação Petrobras de Seguridade Social*), a nonprofit legal entity governed by private law with administrative and financial autonomy.

Pension plans in Brazil are regulated by the National Council for Supplementary Pension (*Conselho Nacional de Previdência Complementar – CNPC*), which establishes all guidelines and procedures to be adopted by the plans for their management and relationship with stakeholders.

Petros Foundation periodically carries out revisions of the plans and, when applicable, establishes measures aiming at maintaining the financial sustainability of the plans.

The major post-retirement pension benefits sponsored by the Company are:

- . Petros Plan - Renegotiated (PPSP-R)
- . Petros Plan - Renegotiated - Pre-70 (PPSP-R Pre-70)
- . Petros Plan - Non-renegotiated (PPSP-NR)
- . Petros Plan - Non-renegotiated - Pre-70 (PPSP-NR Pre-70)
- . Petros 2 Plan (PP-2)
- . Petros 3 Plan (PP-3)

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Currently, PPSP-R, PPSP-NR, PPSP-R Pre-70, PPSP-NR Pre-70 and PP-3 are sponsored by Petrobras, and PP-2 by Petrobras, Transpetro, PBIO, TBG, Termobahia, Termomacaé and Araucária Nitrogenados (the latter in process of withdrawing sponsorship).

The PPSP-R and PPSP-NR are splits derived from Petros Plan (PPSP) originally established by the Company in July 1970. On January 1, 2020, PPSP-R Pre-70 and PPSP-NR Pre-70 were created as a split of PPSP-R and PPSP-NR, respectively.

Pension plans supplement the income of their participants during retirement, in addition to guaranteeing a pension for the beneficiaries in case of the death of a participant. The benefit consists of a monthly income supplementing the benefit granted by the Brazilian Social Security Institute.

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The table below provides other characteristics of these plans:

	PPSP-R	PPSP-R Pre-70	PPSP-NR	PPSP-NR Pre-70	PP-2	PP-3
Modality	Defined Benefit	Defined Benefit	Defined Benefit	Defined Benefit	Variable Contribution (defined benefit and defined contribution portions)	Defined Contribution
Participants of the plan	Generally covers employees and former employees who joined the company after 1970 that agreed with changes proposed by the Company in its original pension plan (PO) and amendments.	Generally covers employees and former employees hired prior to July 1, 1970, who enrolled in the PO until January 1, 1996 and remained continuously linked to the original sponsor obtaining the condition of assisted.	Generally covers employees and former employees who joined the company after 1970 that did not agree with changes proposed by the Company in its original pension plan (PO) and amendments	Generally covers employees and former employees hired prior to July 1, 1970, who enrolled in the PO until January 1, 1996 and remained continuously linked to the original sponsor obtaining the condition of assisted and did not agree with changes in its original pension plan (PO) and amendments.	This Plan was established in 2007, also covering employees and former employees that moved from other existing plans.	This plan was implemented in 2021, exclusive option for voluntary migration of employees and retirees from the PPSP-R and PPSP-NR plans.
New enrollments	Closed	Closed	Closed	Closed	Open	Closed
Retirement payments	Lifetime monthly payments supplementing the benefit granted by the Brazilian National Institute of Social Security.				Lifetime defined benefit monthly payments or non-defined benefit monthly payments in accordance with the participant's election.	Undefined benefit with monthly payments, in accordance with the participant election.
Other general benefits	Lump sum death benefit (insured capital) and monthly payments related to the following events: death, disability, sickness, and seclusion.					Lump sum death benefit (insured capital) and monthly payments related to the following events: death, disability, sickness, and seclusion.
Indexation of Retirement payments by the plan	Based on the Nationwide Consumer Price Index.		Based on the current index levels applicable to active employees' salaries and the indexes set out by the Brazilian National Institute of Social Security.		Lifetime monthly payments: based on the Nationwide Consumer Price Index	Undefined benefit monthly payments: based on the variation of individual account Undefined benefit monthly payments: based on the variation of individual account
Parity contributions made by participants and the Company to the plans	It is comprised of: i) normal contributions that covers expected cost of the plans in the long term; and ii) extraordinary contributions that covers additional costs that are generally derived from actuarial deficits.	It is comprised of: normal contributions that covers expected cost of the plans in the long term. Participants are exempt from paying any extraordinary contributions in case of deficit.	It is comprised of: i) normal contributions that covers expected cost of the plans in the long term; and ii) extraordinary contributions that covers additional costs that are generally derived from actuarial deficits.	It is comprised of: normal contributions that covers expected cost of the plans in the long term. Participants are exempt from paying any extraordinary contributions in case of deficit.	It is comprised of: i) normal contributions that covers expected cost of the plans in the long term; and ii) extraordinary contributions that covers additional costs that are generally derived from actuarial deficits (these contributions are not currently being made but may occur in the future).	Regular contributions during the employment relationship, saving for the undefined benefit, accumulated in individual accounts
Terms of Financial Commitment - TFC (debt agreements) assumed by the Company to settle the deficits. Amounts to be paid to Petros Foundation. This obligation is recorded in these financial statements, within actuarial liabilities.	Financial obligations with a principal amounting to US\$508 at 12/31/2021.	Financial obligations with a principal amounting to US\$893 at 12/31/2021.	Financial obligations settled early in 2021.	Financial obligations with a principal amounting to US\$519 at 12/31/2021.	N/A	N/A
	Annually remeasured in accordance with actuarial assumptions, with semi-annual payment of interest based on the updated balance and maturing in 20 years.					

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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. On June 30, 2021, the Company prepaid the remaining balance of this contribution, in the amount of US\$ 447.

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.

Migration to PP-3 and intermediate revision of PPSP-R and PPSP-NR

On January 27, 2021, the Secretariat of Management and Governance of the State-owned Companies (SEST) and the Superintendency of Post-retirement benefits (PREVIC), approved the establishment of Petros Plan 3 (PP-3), as well as changes in regulations of Petros Plan - Renegotiated and Petros Plan Non-renegotiated (PPSP-R and PPSP-NR), not including pre-70 plans, determining the process of migration of participants to PP-3.

The PP-3 is a new pension plan with defined contribution characteristics, implemented as an exclusive option for voluntary migration of participants from the PPSP-R and PPSP-NR plans, not including pre-70 plans, whose deadline for enrollment was on April 30, 2021. The choice for migration is irreversible and irrevocable, in addition to terminating any link with the plan of origin.

On June 15, 2021, the validation of the PP-3 enrollments was completed, totaling 2,176 registrations, as well as technical and administrative feasibility studies were performed, allowing its implementation as of August 2021.

Thus, in the second quarter of 2021, the Company carried out an intermediate revision of the PPSP-R and PPSP-NR plans, which resulted in a US\$ 1,731 reduction in liabilities, comprising: (i) a US\$ 1 gain in the statement of income for the past service cost of the 2,176 participants who opted for the migration (as detailed in table "Changes in the net actuarial liability"); (ii) a US\$ 1,721 gain in shareholders' equity within other comprehensive income, mainly due to the increase in the discount rate applied to actuarial liabilities; and the remaining US\$ 9 as cumulative translation adjustments.

On September 9, 2021, Petrobras made a contribution in the amount of US\$ 241 (of which US\$ 231 relates to participants originally from the PPSP-R, and US\$ 10 from the PPSP-NR), in addition to US\$ 18 paid in June 2021 for the revision of the lump sum death benefit, as set forth in the deficit settlement plan for PPSP-R and PPSP-NR.

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At December 31, 2021, this obligation was revised using the actuarial assumptions in force, which results are shown in note 17.5.2.

17.3.2. Net actuarial liabilities and expenses, and fair value of plans assets

a) Changes in the actuarial liabilities recognized in the statement of financial position

	2021				
	Pension Plans		Health Care Plan	Other plans	Total
	PPSP-R (*)	PPSP-NR (*)	Petros 2		
Amounts recognized in the Statement of Financial Position					
Present value of obligations	11,481	3,485	987	4,485	9 20,447
(-) Fair value of plan assets	(7,431)	(2,316)	(822)	-	2 (10,567)
Net actuarial liability as of December 31, 2021	4,050	1,169	165	4,485	11 9,880
Changes in the net actuarial liability					
Balance as of January 1, 2021 (**)	7,524	2,696	477	5,356	16 16,069
Recognized in the Statement of Income	469	178	72	1,388	(9) 2,098
Past service cost	(1)	-	-	845	- 844
Present value of obligation	(730)	(33)	-	845	- 82
Plan assets transferred to PP-3	496	22	-	-	- 518
Sponsor contribution for PP-3	233	11	-	-	- 244
Current service cost	13	1	37	158	(10) 199
Net interest	438	172	35	385	1 1,031
Interest on the obligations with contribution for the revision of the lump sum death benefit	19	5	-	-	- 24
Recognized in Equity - other comprehensive income	(2,223)	(989)	(362)	(1,601)	6 (5,169)
Remeasurement effects recognized in other comprehensive	(2,223)	(989)	(362)	(1,601)	6 (5,169)
Cash effects	(1,339)	(591)	-	(309)	- (2,239)
Contributions paid (***)	(475)	(86)	-	(309)	- (870)
Payments of obligations with contribution for the revision of the lump sum death benefit	(340)	(101)	-	-	- (441)
Payments related to Term of financial commitment (TFC)	(524)	(404)	-	-	- (928)
Other changes	(381)	(125)	(22)	(349)	(2) (879)
Cumulative Translation Adjustment	(381)	(125)	(22)	(349)	(2) (879)
Balance of actuarial liability as of December 31, 2021	4,050	1,169	165	4,485	11 9,880

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(**) It includes obligations with contribution for the revision of the lump sum death benefit

(***) It includes the contribution for the migration to PP-3 (US\$ 241).

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	2020				
	Pension Plans			Health Care Plan	Other plans
	PPSP-R (*)	PPSP-NR (*)	Petros 2		Total
Amounts recognized in the Statement of Financial Position					
Present value of obligations	15,847	4,811	1,177	5,356	26
(-) Fair value of plan assets	(8,650)	(2,213)	(700)	-	(12)
Net actuarial liability as of December 31, 2020	7,197	2,598	477	5,356	14
Changes in the net actuarial liability					
Balance as of January 1, 2020	10,231	3,264	989	11,986	24
Recognized in the Statement of Income	84	40	131	(1,672)	2
Service cost (**)	(298)	(93)	64	(2,348)	-
Costs incurred in the period	382	133	67	676	2
Recognized in Equity - other comprehensive income	(344)	285	(391)	(1,957)	(8)
Remeasurement effects recognized in other comprehensive	(344)	285	(391)	(1,957)	(8)
Cash effects	(474)	(265)	-	(308)	(1)
Contributions paid	(255)	(80)	-	(308)	(1)
Payments related to Term of financial commitment (TFC)	(219)	(185)	-	-	(404)
Other changes	(2,300)	(726)	(252)	(2,693)	(3)
Others	-	-	-	-	2
Cumulative Translation Adjustment	(2,300)	(726)	(252)	(2,693)	(5)
Balance of actuarial liability as of December 31, 2020	7,197	2,598	477	5,356	14
Obligations with contribution for the revision of the lump sum death benefit	315	99	-	-	414
Cumulative Translation Adjustment	12	(1)	-	-	2
Total obligation for pension and medical benefits as of December 31, 2020	7,524	2,696	477	5,356	16
(*) 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.					

b) Changes in the present value of the obligation

	2021				
	Pension Plans			Health Care Plan	Other plans
	PPSP-R (*)	PPSP-NR (*)	Petros 2		Total
Present value of obligations at the beginning of the year					
Present value of obligations at the beginning of the year	15,847	4,811	1,177	5,356	26
Recognized in the Statement of Income	1,179	355	122	543	(8)
Interest expense	1,166	354	85	385	2
Service cost	13	1	37	158	(10)
Past service cost	(1)	-	-	845	-
Recognized in Equity - other comprehensive income	(2,969)	(1,041)	(168)	(1,601)	(7)
Remeasurement: Experience (gains) / losses (**)	(313)	(301)	315	(239)	(8)
Remeasurement: (gains) / losses - demographic assumptions	-	-	(5)	96	-
Remeasurement: (gains) / losses - financial assumptions	(2,656)	(740)	(478)	(1,458)	1
Others	(2,576)	(640)	(144)	187	(2)
Benefits paid, net of assisted contributions	(952)	(319)	(65)	(309)	-
Contributions paid by participants	26	7	-	-	33
Transfer and contribution for PP-3	(680)	(31)	-	-	(711)
Others	-	-	-	-	-
Cumulative Translation Adjustment	(970)	(297)	(79)	496	(2)
Present value of obligations at the end of the year	11,481	3,485	987	4,485	9

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(**) It includes additional contributions - New PED.

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	2020				
	Pension Plans			Health Care Plan	Other plans
	PPSP-R (*)	PPSP-NR (*)	Petros 2		Total
Present value of obligations at the beginning of the year	20,919	5,955	1,672	11,986	37 40,569
Recognized in the Statement of Income	589	190	176	(1,672)	3 (714)
Interest expense	887	283	112	676	3 1,961
Service cost	(298)	(93)	64	(2,348)	- (2,675)
Recognized in Equity - other comprehensive income	(148)	211	(228)	(1,957)	(7) (2,129)
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)
Others	(5,513)	(1,545)	(443)	(3,001)	(7) (10,509)
Benefits paid, net of assisted contributions	(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)
Present value of obligations at the end of the year	15,847	4,811	1,177	5,356	26 27,217

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

(**) It includes additional contributions - PED 2015.

c) Changes in the fair value of plan assets

	2021				
	Pension Plans			Health Care Plan	Other plans
	PPSP-R (*)	PPSP-NR (*)	Petros 2		Total
Fair value of plan assets at the beginning of the year	8,650	2,213	700	-	12 11,575
Recognized in the Statement of Income	728	182	50	-	1 961
Interest income	728	182	50	-	1 961
Recognized in Equity - other comprehensive income	(746)	(52)	194	-	(13) (617)
Remeasurement: Return on plan assets due to lower interest	(746)	(52)	194	-	(13) (617)
Cash effects	999	490	-	309	- 1,798
Contributions paid by the sponsor (Company) (*)	475	86	-	309	- 870
Term of financial commitment (TFC) paid by the Company	524	404	-	-	- 928
Other Changes	(2,200)	(517)	(122)	(309)	(2) (3,150)
Contributions paid by participants	26	7	-	-	- 33
Benefits paid, net of assisted contributions	(952)	(319)	(65)	(309)	- (1,645)
Transfer and contribution for PP-3	(680)	(31)	-	-	- (711)
Cumulative Translation Adjustment	(594)	(174)	(57)	-	(2) (827)
Fair value of plan assets at the end of the year	7,431	2,316	822	-	(2) 10,567

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

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	2020					
	Pension Plans			Health Care Plan	Other plans	Total
	PPSP-R (*)	PPSP-NR (*)	Petros 2			
Fair value of plan assets at the beginning of the year	10,688	2,691	683	-	13	14,075
Recognized in the Statement of Income	505	150	45	-	1	701
Interest income	505	150	45	-	1	701
Recognized in Equity - other comprehensive income	196	(74)	163	-	1	286
Remeasurement: Return on plan assets due to lower interest income	196	(74)	163	-	1	286
Cash effects	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
Other Changes	(3,213)	(819)	(191)	(308)	(4)	(4,535)
Contributions paid by participants	75	15	-	-	-	90
Benefits paid, net of assisted contributions	(920)	(228)	(35)	(310)	(2)	(1,495)
Cumulative Translation Adjustment	(2,368)	(606)	(156)	2	(2)	(3,130)
Fair value of plan assets at the end of the year	8,650	2,213	700	-	12	11,575

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

Pension Plan assets

Seeking to maintain an appropriate investment performance, Petros Foundation annually prepares Investment Policies (PI) specific to each plan, following two models:

- (i) for Petros 2, the achievement of the actuarial goal with the lowest value at risk; and
- (ii) for defined benefit plans, the minimal mismatch in net cash flows, conditioned to the achievement of the actuarial target.

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:

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Type of asset	Quoted prices in active markets	Unquoted prices	Total fair value	2021		2020	
				%	Total fair value	%	
Receivables	-	846	846	8%	847	8%	
Fixed income	3,820	3,044	6,864	67%	7,186	62%	
Government bonds	3,771	751	4,522	-	4,824	-	
Fixed income funds	-	860	860	-	1,500	-	
Other investments	49	1,433	1,482	-	862	-	
Variable income	1,686	232	1,918	16%	2,514	21%	
Common and preferred shares	1,686	-	1,686	-	2,377	-	
Other investments	-	232	232	-	137	-	
Structured investments	33	151	184	2%	113	1%	
Real estate properties	-	475	475	4%	563	5%	
	5,539	4,748	10,287	97%	11,223	97%	
Loans to participants	-	280	280	3%	352	3%	
Total	5,539	5,028	10,567	100%	11,575	100%	

There is no plan asset for the health care plan. Loans to participants are measured at amortized cost, which is considered an appropriate estimate of fair value.

As of December 31, 2021, the investment portfolio included debentures of US\$ 6 (US\$ 9 in 2020), Company's common shares in the amount of US\$ 1 (US\$ 1 in 2020) and real estate properties leased by the Company in the amount of US\$ 243 (US\$ 254 in 2010).

d) Net expenses relating to benefit plans

	Pension Plans		Health Care Plan	Other Plans	Total
	PPSP-R (*)	PPSP-NR (*)			
Related to active employees (cost of sales and expenses)	54	10	58	519	(9) 632
Related to retirees (other income and expenses)	397	163	14	869	- 1,443
Obligations with contribution for the revision of the lump sum death benefit	18	5	-	-	- 23
Net expenses for the year - 2021	469	178	72	1,388	(9) 2,098
Net expenses for the year - 2020 (**)	399	139	131	(1,672)	2 (1,001)
Net expenses for the year - 2019	561	211	75	1,232	7 2,086

(*) It includes amounts of PPSP-R pre-70 and PPSP-NR pre-70

(**) It includes US\$ 1,415 related to the actuarial remeasurement and US\$ 414 to the update of the obligation with the contribution for the reduction of the lump sum death benefit.

17.3.3. Contributions

In 2021, the Company contributed with US\$ 2,239 to the defined benefit plans (reducing the balance of obligations of these plans, as presented in note 17.5.2), and with US\$ 169 and US\$ 1, respectively, to the defined contribution portions of PP-2 and PP-3 plans (US\$ 177 for PP-2 in 2020).

For 2022, the expected contributions for the PPSP-R, PPSP-NR, PPSP-R pre-70 and PPSP-NR pre-70 plans, amounts to US\$ 396, and for PP-2 amounts to US\$ 172, relating to the defined contribution portion.

The contribution to the defined benefit portion of the PP-2 is suspended between July 1, 2012 and June 30, 2022, according to the decision of the Petros Foundation's Deliberative Council, based on the recommendation of actuarial specialists of the Petros Foundation, since there is sufficient reserve to cover the value at risk. Thus, all contributions made during this period are being allocated to the participant's individual account.

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17.3.4. Expected future cash flow

The estimate below reflects only the expected future cash flows to meet the defined benefit obligation recognized at the end of the reporting period.

					2021	2020
		Pension Plan	Health Care Plan	Other Plans	Total	Total
	PPSP-R (*)	PPSP-NR (*)	Petros 2			
Up to 1 Year	904	303	57	247	9	1,520
1 to 5 Years	3,780	1,231	245	894	-	6,150
6 to 10 Years	2,659	837	189	930	-	4,615
11 To 15 Years	1,780	530	145	738	-	3,193
Over 15 Years	2,358	584	351	1,676	-	4,969
Total	11,481	3,485	987	4,485	9	20,447
						27,217

(*) It includes the balance of PPSP-R pre-70 and PPSP-NR pre-70.

17.3.5. Future payments to participants of defined benefit plans that are closed to new members

The following table provides the period during which the defined benefit obligation associated with these plans are expected to continue to affect the Company's financial statements.

	PPSP-R	PPSP-R Pré-70	PPSP-NR	PPSP-NR Pré-70
Number of years during which benefits must be paid to participants of defined benefit plans.	10.72	6.95	11.51	7.57

17.3.6. Measurement uncertainties associated with the defined benefit obligation

The significant financial and demographic actuarial assumptions used to determine the defined benefit obligation are presented in the following table:

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Assumptions	PPSP-R	PPSP-NR	PPSP-R	PPSP-NR	PP2	2021	Health Care Plan
						Pension Plans	
Nominal discount rate (including inflation)(1)	8.11% (05/2021) 10.64% (12/2021)	8.07% (05/2021) 10.62% (12/2021)		10.55%	10.54%	10.73%	8.92% (09/2021) 10.68% (12/2021)
Nominal expected salary growth (including inflation) (2)	5.83%	5.63%	5.83%	5.63%	7.20%		n/a
Expected changes in medical and hospital costs (3)	n/a	n/a	n/a	n/a	n/a		5.24% a 3.25% p.a.
Mortality table	Petros Experience (Bidecrem 2013)	Petros Experiences (Bidecrem 2020)	Petros Experiences (Bidecrem 2016)	Petros Experiences (Bidecrem 2020)	AT-2012 IAM basic fem 10% smoothed		Employees: according to pension plan Assisted: Ex Petros (Bidecrem 2013)
Disability table	American group	American group		n/a	n/a	Álvaro Vindas 50% smoothed	Assets: Álvaro Vindas 50% smoothed
Mortality table for disabled participants	AT-49 male	AT-49 male	MI 2006, by gender, 20% smoothed	Petros Experience 2014	IAPB-57 strong, 10% 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: 3.61% 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.

Assumptions	PPSP-R	PPSP-NR	PPSP-R Pre-70	PPSP-NR Pre-70	PP2	2020	Health Care Plan
						Pension Plans	
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%	7.20%
Nominal expected salary growth (including inflation) (2)	4.75%	4.54%	4.75%	4.54%	6.20%		n/a
Expected changes in medical and hospital costs (3)	n/a	n/a	n/a	n/a	n/a		6.17% a 3.90% p.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: 3.61% 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.

The most significant assumptions are described in Note 4.4.

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17.3.7. Sensitivity analysis of the defined benefit plans

The effect of a 100 basis points (bps) change in the discount rate and in the estimated future medical costs is set out below:

	Discount Rate				Expected changes 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	(1,341)	1,704	(480)	593	628	(511)
Current Service cost and interest cost	(20)	27	(31)	37	96	(77)

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 and financial assumptions, medical costs estimates, historical data related to benefits paid and employee contributions, as set out in note 4 - Critical accounting policies: key estimates and judgments.

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, on a parity basis in relation to the employee's contribution, that are expensed when incurred.

18. Provisions for legal proceedings

18.1. 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;

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- Tax claims including: (i) claims relating to Brazilian federal tax credits applied that were disallowed; and (ii) lack of payment of Social Security Contribution levied on bonuses paid to employees;
- Civil claims, in particular: (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) fines relating to an environmental accident in the State of Paraná in 2000; (ii) fines relating to the Company's offshore operation; and (iii) public civil action for oil spill in 2004 in Serra do Mar State Park in the state of São Paulo.

Provisions for legal proceedings are set out as follows:

Current and Non-current liabilities	12.31.2021	12.31.2020
Labor claims	716	706
Tax claims	306	488
Civil claims	820	713
Environmental claims	176	292
Total	2,018	2,199
	2021	2020
Opening Balance	2,199	3,113
Additions, net of reversals	540	464
Use of provision	(715)	(744)
Revaluation of existing proceedings and interest charges	150	28
Transfer to assets held for sale	(3)	-
Others	11	20
Cumulative translation adjustment	(164)	(682)
Closing Balance	2,018	2,199

In preparing its consolidated financial statements for the year ended December 31, 2021, 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.

18.2. 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:

Non-current assets	12.31.2021	12.31.2020
Tax	5,790	5,154
Labor	796	831
Civil	1,275	1,095
Environmental	101	113
Others	76	88
Total	8,038	7,281

	2021	2020
Opening Balance	7,281	8,236
Additions	1,145	937
Use	(109)	(86)
Accruals and charges	263	90
Others	3	(4)
Cumulative translation adjustment	(545)	(1,892)
Closing Balance	8,038	7,281

In the year ended December 31, 2021, the Company made judicial deposits in the amount of US\$ 1,144, including: (i) US\$ 359 referring to IRPJ and CSLL for not adding profits of subsidiaries and affiliates domiciled abroad to the IRPJ and CSLL calculation basis; (ii) US\$ 339 relating to the unification of Fields (Cernambi, Tupi, Tartaruga Verde and Tartaruga Mestiça); (iii) US\$ 224 related to CIDE and PIS/COFINS on the chartering of platforms; (iv) US\$ 116 referring

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to IRPJ and CSLL in the deduction of expenses with Petros; (v) US\$ 66 referring to several judicial deposits of a tax nature; and (vi) US\$ 57 relating to the lack of payment of Social Security Contribution levied on bonuses paid to employees, mainly offset by (vii) US\$ 132 referring to indemnity action due to the unilateral termination of contract for the securitization of IPI credits.

18.3. 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, administrative and arbitrations proceedings are indexed to inflation and updated by applicable interest rates. As of December 31, 2021, estimated contingent liabilities for which the possibility of loss is not considered remote are set out in the following table:

Nature	12.31.2021	12.31.2020
Tax	24,785	24,511
Labor	7,172	8,179
Civil - General	5,412	4,621
Civil - Environmental	1,192	1,465
Total	38,561	38,776

The tables below detail the main causes of tax, civil, environmental and labor nature, whose expectations of losses are classified as possible:

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	Estimate	12.31.2021	12.31.2020
Description of tax matters			
Plaintiff: Secretariat of the Federal Revenue of Brazil			
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.	9,092	9,532	
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.	3,890	4,106	
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. In 2019, the Company obtained a final decision at CARF, canceling part of the debts. In 2021, new tax notices were issued against the Company.	827	781	
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. In 2021, there was a reduction in the value due to a decision favorable to the Company.	706	812	
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.	428	454	
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. The expected loss in one lawsuit is now deemed possible (formerly remote), due to an unfavorable decision by the Regional Court of the 2nd Region in a similar case.	570	468	
7) 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.	234	326	
8) Deduction of the PIS and COFINS tax base on ship or pay contracts and charters of aircraft and vessels.			
Current status: New notice issued in 2021. The claims involve lawsuit in administrative stage. An appeal was filed. A decision of the first administrative instance is awaited.	330	-	
9) Collection of IRPJ and CSLL - Transfer price - Charter contracts			
Current status: New notice issued in 2021. An appeal was filed. A decision of the first administrative instance is awaited.	287	-	
10) Import tax, PIS/COFINS and customs fines - import of vessels through Repetro's Special Customs Regime.			
Current status: This claim involves lawsuits in different administrative and judicial stages. In 2021, new notices were issued.	249	86	
Plaintiff: States of SP, RJ, BA, PA, AL, MA, PB, PE, AM and SE Finance Departments			
11) 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.	367	384	
Plaintiff: States of RJ, AL and BA Finance Departments			
12) 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.	746	788	
Plaintiff: States of RJ, AL, AM, PA, BA, GO, MA, SP and PE Finance Departments			
13) 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.	788	818	
Plaintiff: States of RJ, BA, PE, SE and AM Finance Departments			
14) 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.	800	812	
Plaintiff: States of GO, RJ, PA, BA, SE, SP, PR, AM, CE, MT, RN and PE Finance Departments			

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15) 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. In 2021, new notices were issued.	569	517
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Plaintiff: States of RJ, PR, AM, BA, PA, PE, SP and AL Finance Departments

16) 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. In 2021, new notices were issued.	446	392
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Plaintiff: State of SP Finance Department

17) 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. In 2021, there was a review of the expected loss of a case, from possible to remote, due to a favorable Court decision.	232	416
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Plaintiff: States of RJ, SP, BA, PE, PR, SE and CE Finance Departments

18) 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: New notices issued in 2021. This claim involves lawsuits still in administrative stages and other lawsuits in judicial stages.	417	331
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Plaintiff: States of RJ, SP, BA, AL, PE, CE and AM Finance Departments

19) 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.	421	418
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Plaintiff: Municipal government of Angra dos Reis/RJ

20) Added value of ICMS on oil import operations.

Current status: This claim involves lawsuits in several judicial stages. The lawsuits are in different procedural stages, still without a decision on the merits in the first instance. In 2021, new lawsuits were filed.	289	99
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Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and Vitória

21) 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.	1,071	1,056
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Plaintiff: Several Municipalities

22) Alleged failure to withhold and pay tax on services (ISSQN).

Current status: There are lawsuits in different administrative and judicial stages.	201	190
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23) Other tax matters	1,825	1,725
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Total for tax matters	24,785	24,511
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Estimate

Description of labor matters

12.31.2021 12.31.2020

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 dispute is in the Federal Supreme Court (STF). Petrobras filed an appeal and, On 07/28/2021, the Minister Rapporteur decided favorably to the Company, reforming the decision of the Plenary of the Superior Labor Court (TST) which was contrary to Petrobras. Currently, the judgment of the appeals filed by the plaintiff and by several amicus curiae is in progress, with 3 votes in favor of the Company, recognizing the merit of the collective bargaining agreement signed between Petrobras and the unions. Considering that the last minister to vote requested additional information, the trial was suspended, and is pending the presentation of the vote by this last minister.

5,916	6,679
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2) Other labor matters	1,256	1,500
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Total for labor matters	7,172	8,179
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	Estimate	12.31.2021	12.31.2020
Description of civil matters			
Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP and other agencies			
1) Administrative and legal proceedings that discuss:			
a) Difference in special participation and royalties in different fields;			
b) 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.	1,197	1,319	
Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP			
2) 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; and to unite Tartaruga Verde and Mestiça fields, 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.	829	471	
Plaintiff: Agência Estadual de Regulação de Serviços Públicos de Energia, Transportes e Comunicações da Bahia (AGERBA) and State Gas Companies			
3) 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: In March 2022, the Company entered into an agreement to extinguish the litigation involving AGERBA, classifying a portion of this amount under dispute as probable and other portion as remote. The claims also involve other lawsuits in different legal stages.	29	308	
Plaintiff: Several service providers			
4) Claims related to goods and services supply contracts, with emphasis on discussions about economic and financial imbalance, contractual breach, fines and early termination of contracts.			
Current status: The claims involve lawsuits in different administrative and judicial stages.	2,472	1,687	
5) Several lawsuits of civil nature, with emphasis on those related to expropriation and easement of passage, corporate disputes and civil liability.	885	836	
Total for civil matters	5,412	4,621	
Description of environmental matters			
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.			
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 parties entered into an agreement and resolved the issue of merit, pending only the discussion relating to the amount of attorney fees.	36	425	
2) Several lawsuits of an environmental nature, with emphasis on fines related to the company's operations and public civil	1,156	1,040	
Total for environmental matters	1,192	1,465	

18.4. Class action in Netherlands and Arbitrations in Brazil and in Argentina

18.4.1. 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

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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 reliefs 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.

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.

On May 26, 2021, the Court ruled that the class action must proceed and that the arbitration clause in Petrobras' Bylaws does not prevent the company's shareholders from having access to the Dutch Judiciary and being represented by the Foundation. However, investors who have already initiated arbitration against Petrobras or who are parties to legal proceedings in which the applicability of the arbitration clause has been definitively recognized are excluded from the action. On the same date, the class action moved to the merits discussion phase.

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 reiterates its victim condition 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, since the final decision will be merely declaratory in nature.

The Company denies the allegations presented by the Foundation and intend to defend themselves vigorously.

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18.4.2. 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.

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. The appeals against this decision are still pending judgement. 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.

18.4.3. 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.

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18.5. Other legal proceedings 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 Argentina 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. On March 4, 2021, the Court (Room A of the Economic Criminal Chamber) decided that the jurisdiction for the trial of this criminal action should be transferred from the Criminal Economic Court No. 3 of the city of Buenos Aires to the Criminal Economic Court No. 2 from that same city;
- 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, currently the subject of appeals in Argentine courts. On October 21, 2021, after an appeal by the Association, the Court of Appeals revoked the lower court decision that had recognized Petrobras' immunity from jurisdiction and recommended that the lower court take some steps to certify whether the Company could be considered criminally immune in Argentina for further reassessment of the issue. Petrobras appealed against this decision, and its judgment is still pending. On the same occasion, the Court of Appeals recognized that the Association could not act as a representative of financial consumers, due to the loss of its registration with the competent Argentine bodies. This criminal action is pending before the Criminal Economic Court No. 2 of the city of Buenos Aires.

18.6. Tax recoveries under dispute

18.6.1. 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. 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 Federal Revenue of Brazil, as set out in note 16.

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 was pending final decision of the Federal Supreme Court (STF).

On May 14, 2021, the extract from the minutes of the judgment of the STF on the motion for clarification filed by the Brazilian Federal Government was published and made it clear that the criterion to be used for the purposes of calculating the ICMS in the calculation basis of the PIS and COFINS is the amount presented in the invoice. Based on the decision of the STF, Petrobras recognized the asset related to the difference between these criteria. This amount is being offset in the Company's tax calculation.

The recognized effects relating to the exclusion of ICMS on the PIS and COFINS basis, as well as the offset of these amounts, are presented in note 16.1.

18.6.2. Compulsory Loan - Eletrobrás

The Brazilian Federal Government, aiming to finance the expansion of the national electricity system, established the compulsory loan that lasted until 1993 in favor of Eletrobrás, which was the operator of this system. The loan was charged to consumers' electricity bills.

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In 2010, the Company filed a lawsuit to recognize its right to receive the differences in monetary correction and interest on a compulsory loan from Eletrobrás, in relation to the third conversion of Eletrobrás shares, in the period from 1987 to 1993.

In 2021, the Company changed to probable the expectation of a gain on this lawsuit, based on recent judicial decisions on the subject. Considering that legal discussions are still pending regarding the methodology for calculating the credit, the Company is still unable to estimate the amount of the contingent asset.

Considering that legal discussions are still pending regarding the calculation methodology for calculating the credit, the value of the contingent asset will be determined in the course of the process

18.6.3. Lawsuits brought by natural gas distributors and others

Some natural gas distributors and other entities have filed lawsuits against Petrobras, in which they claim the extension of the effects of the natural gas supply contracts that expired in December 2021. As the prices of liquefied natural gas imported by Petrobras, necessary to meet new commitments showed a great increase in the last months of 2021, Petrobras offered for new contracts with start of supply from January 1, 2022 proposals with prices in line with the current market situation. However, some natural gas distributors and other entities rejected the new prices, claiming that Petrobras allegedly abuses its economic power.

In these lawsuits, the judges granted injunctions to maintain the prices of the old contracts. Petrobras appealed these decisions and the appeals are awaiting judgment. At the same time, the Company proposed arbitration, given that this is the dispute settlement method defined in the contracts.

18.7. 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.

19. Provision for decommissioning costs

The following table details the amount of the decommissioning provision by production area:

	12.31.2021	12.31.2020
Onshore	873	1,627
Shallow waters	3,732	4,309
Deep and ultra-deep post-salt	8,420	9,775
Pre-salt	2,594	3,069
	15,619	18,780

Changes in the provision are presented below:

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Non-current liabilities	2021	2020
Opening balance	18,780	17,460
Adjustment to provision	(1,186)	5,720
Transfers related to liabilities held for sale	(704)	(519)
Payments made	(730)	(446)
Interest accrued	723	571
Others	5	15
Cumulative translation adjustment	(1,269)	(4,021)
Closing balance	15,619	18,780

The reduction in the balance of the provision in 2021 mainly relates to the update of the 2022–2026 Strategic Plan premises; the review of technical assumptions and contractual renegotiations; the extension of the concessions' economic cut-off year, mainly due to the increase in the price of Brent; as well as the conclusion of sales of concessions.

19.1. 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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20. Other Assets and Liabilities

Assets		12.31.2021	12.31.2020
Escrow account and/ or collateral	(a)	961	780
Prepaid expenses	(b)	308	394
Advances to suppliers	(c)	297	263
Derivatives Transactions	(d)	31	119
Agreements and covenants	(e)	262	71
Others		201	238
		2,060	1,865
Current		1,573	1,230
Non-Current		487	635
Liabilities		12.31.2021	12.31.2020
Obligations arising from divestments	(f)	1,106	936
Contractual retentions	(g)	521	536
Advances from customers and partners	(h)	606	433
Provisions for environmental expenses, R&D and fines	(i)	568	460
Other recoverable taxes	(j)	143	406
Derivatives Transactions	(d)	282	283
Various creditors		84	123
Others		715	483
		4,025	3,660
Current		1,875	1,603
Non-Current		2,150	2,057

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) Fair value of open positions and transactions closed but not yet settled.

e) Cash and amounts receivable from partners in E&P consortia operated by Petrobras.

f) Provisions for financial reimbursements assumed by Petrobras to be made to the acquirer, referring to abandonment costs of divested assets. 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 concessions.

g) 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.

h) Amounts related to the advanced or cash receipt from third parties, related to the sale of products or services in Brazil.

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i) Accrued amounts for environmental compensation assumed by the Company in the course of its operations and research projects.

j) Non-current portion of other recoverable taxes (see note 16).

20.1. 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.

21. 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 year ended December 31, 2021, 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 2021, new leniency and plea agreements entitled the Company to receive funds with respect to compensation for damages, in the amount of US\$ 235 (US\$ 155 in 2020), accounted for as other income and expenses. Thus, the total amount recovered from Lava Jato investigation through December 31, 2021 was US\$ 1,522.

21.1. Investigations involving the Company

21.1.1. U.S. Securities and Exchange Commission and Department of Justice inquiries

On September 27, 2018, the Company entered into agreements to settle the open matters with the U.S. Department of Justice (DoJ) and the U.S. Securities and Exchange Commission (SEC) investigations, which encompassed the Company's internal controls, books and records, and financial statements from 2003 to 2012.

Subsequently, Petrobras has concluded the obligations set forth in the agreement with the DoJ, including continuing to enhance its integrity program and self-reporting during the agreement's three-year term.

21.1.2. 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.

21.1.3. 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.

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22. Commitment to purchase natural gas

The GSA agreement (Gas Supply Agreement) entered into with Petrobras and Yacimientos Petrolíferos 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 m³ per day to 20 million m³ per day, which became effective as from March 11, 2020.

Thus, as of December 31, 2021, the total amount of the GSA for 2022 is nearly 7.5 billion cubic meters of natural gas (equivalent to 20.5 million cubic meters per day) and corresponds to a total estimated value of US\$ 1.7 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\$ 1.86 billion, from January 2021 to May 2024.

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23. Property, plant and equipment

	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
Balance at January 1, 2020	4,450	70,378	21,952	40,897	21,588	159,265
Additions	-	4,587	3,090	365	4,338	12,380
Additions to / review of estimates of decommissioning costs	-	-	-	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	(14)	(7,293)	(2,855)	(4,603)	(337)	(15,102)
Impairment reversal	-	5,542	482	1,612	124	7,760
Cumulative translation adjustment	(981)	(12,248)	(4,558)	(8,963)	(4,517)	(31,267)
Balance at December 31, 2020	3,043	58,680	15,443	31,166	15,869	124,201
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)
Balance at December 31, 2020	3,043	58,680	15,443	31,166	15,869	124,201
Additions	-	1,650	5,761	5	6,954	14,370
Additions to / review of estimates of decommissioning costs	-	-	-	(1,069)	-	(1,069)
Capitalized borrowing costs	-	-	971	-	-	971
Signature Bonuses Transfers (note 24)	-	-	-	11,629	-	11,629
Write-offs	(38)	(588)	(599)	(1,645)	(279)	(3,149)
Transfers	(295)	2,934	(3,160)	1,781	3	1,263
Transfers to assets held for sale	(53)	(2,776)	(575)	(822)	(14)	(4,240)
Depreciation, amortization and depletion	(97)	(4,235)	-	(4,342)	(4,281)	(12,955)
Impairment recognition (note 25)	-	(377)	(1)	(27)	(4)	(409)
Impairment reversal (note 25)	-	1,796	114	1,879	34	3,823
Cumulative translation adjustment	(177)	(3,958)	(1,032)	(2,708)	(1,230)	(9,105)
Balance at December 31, 2021	2,383	53,126	16,922	35,847	17,052	125,330
Cost	4,080	98,085	25,954	61,906	26,382	216,407
Accumulated depreciation, amortization, depletion and impairment (****)	(1,697)	(44,959)	(9,032)	(26,059)	(9,330)	(91,077)
Balance at December 31, 2021	2,383	53,126	16,922	35,847	17,052	125,330
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 30 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 with proved reserves and other costs directly associated with the exploration and production of oil and gas.

(****) In the case of land and assets under construction, it refers only to impairment losses.

The investments made by the company in 2021 were mainly in the development of production of oil and natural gas fields, primarily in the pre-salt complex (Búzios Co-participation Agreement, unitized Atapu, Mero, unitized Sépia, among others), including the contracting of new leases. In 2021, the transfer of intangible assets to property, plant and equipment, in the amount of US\$ 11,629, relating to the value of the signature bonus paid in the auction of the Surplus of the Transfer of Rights in the Búzios field after the Co-participation Agreement from Búzios became effective.

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Regarding the right-of-use assets, the readjustment clauses with possible effects on depreciation, amortization, depletion and accumulated impairment are presented as of December 31, 2021 as follows:

	Platforms	Vessels	Properties	Total
Balance at December 31, 2021	9,840	5,997	1,215	17,052
Cost	13,362	11,267	1,753	26,382
Accumulated depreciation, amortization and depletion	(3,522)	(5,270)	(538)	(9,330)
Balance at December 31, 2020	7,979	7,167	723	15,869
Cost	11,144	11,256	1,379	23,779
Accumulated depreciation, amortization and depletion	(3,165)	(4,089)	(656)	(7,910)

23.1. Estimated useful life

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at December 31, 2021
5 years or less	3,931	(3,436)	495
6 - 10 years	7,997	(5,991)	2,006
11 - 15 years	4,982	(1,358)	3,624
16 - 20 years	27,614	(15,434)	12,180
21 - 25 years	26,847	(6,200)	20,647
25 - 30 years	10,271	(3,042)	7,229
30 years or more	4,478	(1,944)	2,534
Units of production method	15,931	(9,244)	6,687
Total	102,051	(46,649)	55,402
Buildings and improvements	3,966	(1,690)	2,276
Equipment and other assets	98,085	(44,959)	53,126

23.2. 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.

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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.

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.

23.3. Oil and Gas fields operated by Petrobras returned to ANP

In 2021, the following oil and gas fields were returned to ANP: Bijupirá, Lagosta, Merluza e Salema. These fields were returned to ANP mainly due to their economic unfeasibility and, as a consequence, the Company wrote off the amount of US\$ 27 in addition to impairments recognized in prior years.

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, Maricu 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.

23.4. 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, 2021, the capitalization rate was 6.17% p.a. (6.12% p.a. for the year ended December 31, 2020).

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24. Intangible assets

	Rights and Concessions (*)	Software	Goodwill	Total
Balance at January 1, 2020	19,168	242	63	19,473
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)
Balance at December 31, 2020	14,714	210	24	14,948
Cost	14,803	1,245	24	16,072
Accumulated amortization and impairment	(89)	(1,035)	-	(1,124)
Balance at December 31, 2020	14,714	210	24	14,948
Addition	106	165	-	271
Capitalized borrowing costs	-	5	-	5
Write-offs	(12)	(3)	-	(15)
Transfers	(94)	3	-	(91)
Signature Bonuses Transfers	(11,629)	-	-	(11,629)
Amortization	(6)	(54)	-	(60)
Impairment reversal	-	1	-	1
Cumulative translation adjustment	(384)	(19)	(2)	(405)
Balance at December 31, 2021	2,695	308	22	3,025
Cost	2,744	1,321	22	4,087
Accumulated amortization and impairment	(49)	(1,013)	-	(1,062)
Balance at December 31, 2021	2,695	308	22	3,025
Estimated useful life in years	(**)	5	Indefinite	

(*) It comprises mainly signature bonuses (amounts paid in concession contracts for oil or natural gas exploration and production sharing), in addition to public service concessions, trademarks and patents and others.

(**) Mainly composed of assets with indefinite useful lives, which are reviewed annually to determine whether events and circumstances continue to support an

24.1. Surplus volumes of Transfer of Rights Agreement

Búzios

On November 6, 2019, the ANP held the Bidding Round for the Surplus Volume of the Transfer of Rights Agreement, when the Company acquired a 90% interest in the exploration and production rights of the surplus volume of Búzios field, in the pre-salt layer of Santos basin, in partnership with CNOOC Brasil Petróleo e Gás Ltda. (5%) and CNOOC Petroleum Brasil Ltda. (5%).

The signature bonus corresponding to the Company's interest in the amount of US\$ 14,912 was paid in the last quarter of 2019 and Production Sharing Contract was signed with PPSA, MME and ANP in the first quarter of 2020.

a) Búzios Co-participation Agreement

On June 11, 2021, the Company signed with Pré-sal Petróleo S.A. (PPSA) and its partners CNOOC and CNOOC a Co-participation Agreement (Agreement) for Búzios field, to regulate the coexistence of the Transfer of Rights Agreement and the Production Sharing Contract for the surplus volume of the Búzios field. The total compensation due to the Transfer of Rights Agreement (100% Petrobras) by the Production Sharing Contract is US\$ 29 billion, which will be recovered in cost oil by the contractors.

The amount was calculated based on the Ordinance 213/2019 of MME guidelines and took into account current market parameters, as well as the deferral of the production of the volume contracted under the Transfer of Rights regime, in

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order to maximize the Net Present Value (NPV) of the Brazilian Government and maintain Petrobras' NPV calculated based on the effective date of the Co-participation Agreement.

According to the agreement for the formation of the consortium to participate in the bid which occurred in 2019, the amount of US\$ 2.9 billion was paid by the partners CNOOC and CNODC to Petrobras in August 2021, after conditions precedent were met, including the approval by the ANP. Thus, the contract became effective on September 1, 2021.

On this date, the partial disposition of the undivided economic interest of assets associated with Búzios field was carried out, including the part of the signature bonus paid by Petrobras for this field, in exchange for financial compensation, resulting in a transaction analogous to a sale.

The partners and PPSA defined the Development Plan for the field, which is expected to result in a recoverable volume of 10,346 million barrels of oil equivalent during the term of the Agreement, which expires in September 2050. This recoverable volume results in participations in the co-participated area of 26% for the Transfer of Rights Agreement and 74% for the Production Sharing Agreement. Considering the participation of each company in its respective contract and the participation of each contract in the co-participated area, the participation in the area is 92.6594% for Petrobras and 3.6703% for each of the partners.

b) Reimbursement of expenses

Expenses incurred by Petrobras in the ordinary operations of the bidding area for the benefit of the consortium, made prior to the start of the Agreement and not included in the total compensation amount, in the estimated amount of US\$ 57 (R\$ 316 million), will be reimbursed to Petrobras by the partners CNOOC and CNODC.

c) Exercise of partners' call option

Within 30 days after the Agreement's effective date, Petrobras' partners in the consortium had the right to exercise a call option, provided for in the agreement that established the consortium for bidding in 2019, to acquire, each of them, an additional 5% interest.

On September 29, 2021, the partner CNOOC expressed its interest in exercising the call option. The estimated amount to be received by Petrobras at the closing of the operation for the portion of CNOOC is US\$ 2,080, as follows: (i) US\$ 1,450 for the compensation, subject to the adjustments provided for in the contract, which considers the same effective date of the Agreement on September 1, 2021, and; (ii) US\$ 630 for the reimbursement of the signature bonus referring to the additional participation of CNOOC. The values will be updated until the transaction closing, expected to occur in the first quarter of 2022.

The assets related to this transaction were reclassified to assets held for sale (note 31).

The effectiveness of this transaction is subject to approval by the Administrative Council for Economic Defense (CADE), ANP and MME.

The CNODC partner did not express interest in the exercise of the call option. Thus, after the completion of purchase of additional 5% interest by CNOOC, Petrobras will hold 85% of the exploration and production rights of the surplus volumes of the Transfer of Rights Agreement of Búzios field, while CNOOC will hold 10% and CNODC, 5%. Moreover, considering all contracts in Búzios field (Transfer of Rights, Production Sharing and Concession of Tambuatá), Petrobras will hold an 88.99% interest, while CNOOC will hold 7.34% and CNODC, 3.67%.

d) Further information

The result of the operation is shown below:

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Financial compensation received	2,938
Reimbursement of expenses	59
Disposition of other assets and liabilities – PP&E and Decommissioning	(976)
Disposition of signature bonuses	(1,390)
Total effect in the statement of income (within Other income and expenses)	631

Since this bidding relates to the surplus volume of fields with technical and commercial feasibility already defined, the signature bonus paid, in the amount of US\$ 11,625, was transferred from intangible assets to property, plant and equipment after the Co-Participation Agreement became effective.

The volumes of reserves, considering the beginning of the effectiveness of the Búzios Field Agreement, will be progressively incorporated according to the certification criteria and are partially reflected in the estimates of proved reserves for December 31, 2021.

Atapu and Sépia

Petrobras acquired the rights for the exploration and production on these fields in the Second Bidding Round for the Surplus Volume of the Transfer of Rights Agreement in the Production Sharing Regime, carried out by the ANP,

The rights in Atapu field were acquired in partnership with Shell Brasil (25%) and TotalEnergies EP (22.50%). Petrobras will hold a 52.50% interest and will operate the field.

Regarding Sépia field, Petrobras will be the operator with a 30% interest, in partnership with TotalEnergies EP (28%), Petronas (21%), and QP Brasil (21%).

The amounts corresponding to the signature bonus to be paid, are US\$ 384 (R\$ 2,141 million) for Atapu and US\$ 376 (R\$ 2,101 million) for Sépia, expected to be paid in the first quarter of 2022, when it will be recognized within intangible assets.

The effective date of the Co-participation Agreement was defined in MME Ordinance No. 519/2021, as the first business day subsequent to the certification by PPSA of the settlement of the compensation to Petrobras. On that date, Petrobras will sign this agreement with PPSA and the partners, which will regulate the coexistence of the Transfer of Rights Agreement with the Production Sharing Agreement.

The compensation for Atapu and Sépia will be paid by the partner companies to Petrobras, in proportion to their participation in the consortia, and corresponds, respectively, to US\$ 1,545 and US\$ 2,240. Petrobras expect to receive the compensation for Atapu until April 15, 2022, while for Sépia it will be defined with the consortium members. These values may be complemented based on positive changes in future Brent prices (earn out), between 2022 and 2032, according to MME Normative Ordinance No. 08/2021.

On the effective date of the agreements, assets associated with these fields will be partially written off, including the portion of the signature bonus paid by Petrobras due to the Transfer of Rights Agreement applicable to this field, in exchange for financial compensation, resulting in a transaction analogous to a sale. Then, the result of this transaction will be presented as other income or expenses. Any adjustments to reserve estimates will be incorporated by Petrobras in due course.

Itapu Co-participation Agreement

On July 9, 2021, Petrobras signed with Pré-sal Petróleo SA (PPSA) a Co-participation Agreement of Itapu, which will regulate the coexistence of the Transfer of Rights Agreement and the Production Sharing Contract for the Surplus volume of the Itapu field, in the pre-salt layer of Santos Basin.

Negotiations began after the bidding, held on November 6, 2019, in which Petrobras acquired 100% of the exploration and production rights of the surplus volume of the Transfer of Rights Agreement of Itapu field.

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Petrobras and PPSA defined the Development Plan for the field, including estimates for production and recoverable volume. As a result, the Company's share in the area is 51.708% for the Transfer of Rights Agreement, with a total recoverable volume of 350 million boe, and 48.292% for the Production Sharing Agreement, with a total recoverable volume of 319 million boe.

The assumptions for oil and gas prices, discount rate and cost metrics used for the purpose of calculating the compensation for the deferral of the cash flow of the transfer of rights and which will be recognized as cost in oil were established in MME Ordinance No. 213/2019.

According to ANP Board Resolution No. 811/2021 of December 22, 2021, the Agreement was approved, becoming effective on January 1, 2022

24.2. Assumption of interest in concessions

Six blocks in the state of Amapá

In September 2020 and April 2021, respectively, the Company closed agreements with Total E&P Brasil Ltda (TotalEnergies), and BP Energy do Brasil Ltda (BP) regarding the participations of these companies in blocks located in ultra-deep waters in northern Brazil. TotalEnergies was the operator in 5 blocks with a 40% interest, while Petrobras and BP had 30% each one. BP also had a 70% interest in another block, also a partner of Petrobras (30%). With the closing of these agreements, Petrobras will hold 100% interest in these six blocks and become the sole operator.

As a result of these agreements, firmed between the parties and ANP in September 2021, Petrobras will receive US\$ 199 as a compensation for the total assumption of the minimum exploratory program, of which US\$ 139 was received at the closing of the operation, and the remaining balance to be received in June 2022.

The Company also registered an US\$ 88 addition within intangible assets, measured at fair value, for the assumption of participation in these concessions, without disbursement made by the Company.

Thus, the Company recognized a US\$ 287 gain (including the compensation and the addition of assets) recognized in other income and expenses.

Potiguar basin

In the last quarter of 2021, Petrobras and the ANP signed an amendment to the Concession Agreement relating to the deep waters in the Potiguar Basin, for the total assignment of the partners interest to Petrobras (BP 40% e Petrogal 20%), which will hold a 100% interest in this area.

Thus, the Company recorded an US\$ 1 addition in intangible assets and of US\$ 64 within property, plant and equipment, measured at fair value, due to the assumption of participation in the concession, and a US\$ 65 gain within other income and expenses, without cash effects.

24.3. Exploration rights returned to the Brazilian Agency of Petroleum, Natural Gas and Biofuels - Agência Nacional de Petróleo, Gás Natural e Biocombustíveis (ANP)

In 2021, 3 exploration areas in Santos and Potiguar basins were returned to the ANP (49 in 2020 in Camamu-Almada, Espírito Santo, Jequitinhonha, Potiguar, Recôncavo, Pelotas, Pernambuco-Paraíba, Santos and Sergipe-Alagoas basins), totaling US\$ 3 (US\$ 172 in 2020).

24.3.1. Accounting policy for intangible assets

Intangible assets are measured at the acquisition cost, less accumulated amortization and impairment losses.

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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 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.

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.

25. Impairment

(Losses) / reversals	2021	2020	2019
Property, plant and equipment	3,414	(7,342)	(2,882)
Intangible assets	1	(12)	(1)
Assets classified as held for sale	(225)	15	35
Impairment (losses) / reversals	3,190	(7,339)	(2,848)
Investments	383	(514)	(4)
Net effect within the statement of income	3,573	(7,853)	(2,852)
Losses	(654)	(15,680)	(3,662)
Reversals	4,227	7,827	810

The Company annually tests its assets for impairment or when there is an indication that their carrying amount may not be recoverable, or that there may be a reversal of impairment losses recognized in previous years.

During the third quarter of 2021, observing the oil and gas market scenario, the Company's management reassessed the Brent prices provided for in the 2021-2025 Strategic Plan (in force on that date) and updated the short-term assumptions established in that plan, recognizing US\$ 3,098 impairment reversals in that quarter.

On November 24, 2021, management concluded and approved its 2022-2026 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 the last quarter of this year.

The oil and gas production estimated in the scope of this 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 to be allocated to deep and ultra-deep water projects.

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25.1. Impairment of property, plant and equipment and intangible assets

Asset or CGU by nature (*)	Carrying amount	Recoverable amount (**)	Impairment (losses) / reversals	Business segment	Comments
2021					
Property, plant and equipment and intangible assets					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	23,734	36,396	3,373	E&P	item (a1)
Oil and gas production and drilling equipment in Brazil	250	-	(250)	E&P	item (b1)
Second refining unit in RNEST	404	767	359	RT&M	item (c1)
Others			(67)	Several	
			3,415		
2020					
Property, plant and equipment and intangible assets					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	42,421	40,511	(7,316)	E&P	item (a2)
Oil and gas production and drilling equipment in Brazil	120	-	(119)	E&P	item (b2)
Second refining unit in RNEST	410	388	(22)	RT&M	item (c2)
Comperj	266	526	260	RT&M	item (d1)
Corporate facilities	152	-	(161)	Corporate, others	item (e)
Others			2	Several	
			(7,354)		
2019					
Property, plant and equipment and intangible assets					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	105,532	196,994	(1,859)	E&P	item (a3)
Oil and gas production and drilling equipment in Brazil	314	-	(307)	E&P	item (b3)
Second refining unit of RNEST	1,043	498	(534)	RT&M	item (c3)
Comperj	330	117	(209)	RT&M	item (d2)
Transpetro's fleet of vessels	1,347	1,453	103	RT&M	item (f)
Fertilizer plant - UFN III	204	-	(200)	RT&M	item (g)
Oil and gas production and drilling equipment abroad	343	15	(333)	E&P	item (h)
Others	33	-	(67)	Several	
			(3,406)		

(*) 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 assets held for sale, for which is used fair value.

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.

25.1.1. Planning assumptions used in impairment testing

The cash flow projections used to measure the value in use of the CGUs at December 31, 2021, were mainly based on the following updated assumptions for average Brent prices and Brazilian real/U.S. dollar average exchange rates:

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2021-2025 Strategic Plan (*)	2022	2023	2024	2025	2026	Long term Average
Average Brent (US\$/barrel)	72	65	60	55	55	55
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	5.40	5.33	5.19	5.15	5.14	5.08
(*) In the impairment testing in the third quarter, projected average Brent prices were US\$ 69.40 for 2021 and US\$ 69.20 for 2022, kept constant for the other years.						

At December 31, 2020, average Brent prices and Brazilian real/U.S. dollar average exchange rates used were:

	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

Post-tax discount rates, excluding inflation, applied in the tests were:

Activity	12.31.2021	12.31.2020
Producing properties relating to oil and gas activities in Brazil	6.4% p.a.	7.1% p.a.
RT&M in Brazil	5.5% p.a.	6.1% p.a.
RT&M in Brazil – postponed projects	6.2% p.a.	7.4% p.a.
Gas logistics	5.4% p.a.	6.4% p.a.
Transport in Brazil	4.9% p.a.	5.4% p.a.

25.1.2. Revision of Cash Generating Units

During 2021, management identified and assessed the following changes in CGUs:

E&P Segment

- (i) Annexation of the following areas approved by the ANP: Guriatã, Guriatã Sul, Canário da Terra, Canário da Terra Sul, Riacho da Barra and Rio Sauípe fields to Fazenda Imbé concession; and of Jandaia and Rio da Serra fields to the Tangará concession. As a result, assets of these fields were incorporated by Imbé and Tangará CGUs;
- (ii) Closing of the divestment process of the following concessions (with their related assets written-off): São Mateus 8, Ventura and Miranga group of Fields, and of several other individual fields;
- (iii) Return of the following concessions to the ANP (with their related assets written-off): Bijupirá and Salema group of fields (CGU Bijupirá-Salema) and Merluza and Lagosta group of fields (CGU Merluza);
- (iv) North group of fields: exclusion of platforms P-26, P-32 and P-33 from this CGU, due to management's decision to sell and definitively cease the operations of the platforms in the Marlim field;
- (v) Creation of the CGU SEAP I, comprising Agulhinha, Agulhinha Oeste, Cavala and Palombeta fields and of the CGU SEAP II, comprising Budião, Budião Noroeste and Budião Sudeste fields, arising from the successful appraisal for discoveries in blocks BM-SEAL-4, BM-SEAL-4A, BM-SEAL-10 and BM-SEAL-11.

Gas & Power Segment

- (i) Exclusion of Natural Gas CGU: Management reassessed the interdependence of the cash flows of assets in the natural gas business in view of the new regulatory framework for the sector, deciding to exclude the Natural Gas CGU and to create new CGUs: Integrated Processing System CGU; Cacimbas UGC UTG; Sul Capixaba CGU; Guamaré CGU; Urucu CGU and Catu CGU.
- (ii) Exclusion of the thermoelectric power plants Arembepe, Muryci and Bahia 1 from the CGU Power, due to the closing of the sale on December 6, 2021, with the consequent write-off of the related assets.

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RT&M Segment

- (i) CGU Downstream: exclusion of refineries Landulpho Alves (RLAM) and Isaac Sabbá (REMAN) from this CGU, due to the divestment process. The sale of RLAM was closed in November 2021 and its assets were written-off, while the closing for the sale of REMAN is still pending at December 31, 2021, and its assets are held for sale (see note 31.1);
- (ii) CGU SIX: in November 2021, the Company signed an agreement for the sale of Shale Industrialization Unit (SIX), in the state of Paraná, when these assets were classified as held for sale (see note 31.1);
- (iii) CGU Comperj: exclusion of this CGU, comprising assets from the first refining unit of the Petrochemical Complex of Rio de Janeiro, due to the cancellation of this project, with part of the remaining assets incorporated by the CGU Itaboraí Utilities, composed of assets destined to support the natural gas processing plant (UPGN) of the route 3 integrated project; and part incorporated by the CGU GasLub, referring to the set of assets that remain hibernated and that are under evaluation for use in other projects.

Information on key assumptions for impairment testing and on CGU definitions is presented in notes 4.2 and 4.3, respectively.

25.1.3. 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 – 2021

Impairment reversals on producing properties in Brazil amount to US\$ 3,373, most of it related to CGUs of producing properties, reflecting the revision on the key assumptions of the Strategic Plan, mainly the increase in average Brent prices.

The following table presents significant impairment reversals for 2021:

CGU	Basin	Area	Impairment reversals	Carrying amount after impairment
Roncador	Campos basin	Post-Salt	860	7,075
North	Campos basin	Post-Salt	714	4,861
Carmópolis	Sergipe basin	Onshore and shallow-water	611	840
Berbigão-Sururu	Santos basin	Pre-Salt	388	3,072
Albacora Leste	Campos basin	Post-Salt	369	1,502
Marlim Leste	Campos basin	Post-Salt	48	2,435
Papa-Terra	Campos basin	Post-Salt	41	39
Uruguá	Santos basin	Post-Salt	35	82
Marlim Sul	Campos basin	Post-Salt	32	5,002
Others (*)	Several	Several	275	2,023
Total			3,373	26,931

(*) It comprises 39 CGUs.

a2) Producing properties in Brazil – 2020

Impairment losses on producing properties in Brazil amounted to US\$ 7,316, most of it related to CGUs that provided 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.

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a3) 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.

b1) Oil and gas production and drilling equipment in Brazil - 2021

Impairment losses of US\$ 250 relates to equipment and structures in the E&P segment, mainly due to the decision to cease the use of platforms P-26 and P-33 in the Marlim field, leading to the recognition of losses in the amount of US\$ 210.

b2) Oil and gas production and drilling equipment in Brazil - 2020

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.

b3) 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.

c1) Second refining unit of RNEST – 2021

The cash flows to measure the value in use of the second refining unit of RNEST take into account the decision to resume the works and to start operating in August 2027, according to the 2022-2026 Strategic Plan, triggering impairment reversals in the amount of US\$ 359.

c2) Second refining unit of RNEST – 2020

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\$ 22.

c3) 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.

d1) 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.

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d2) 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.

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.

f) 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.

g) 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.

h) 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.

25.1.4. 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 CGUs with estimated impairment losses or reversals if there was a 10% reduction or increase in their recoverable amounts, 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 impairment losses				
Producing properties relating to oil and gas activities in Brazil (2 CGUs)	E&P	178	196	18
Second refining unit of RNEST	RT&M	769	690	79
Itaboraí utilities	G&P	763	686	77
		1,710	1,572	174
<hr/>				
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 (2 CGUs)	E&P	178	196	18
Second refining unit of RNEST	RT&M	769	844	75
Itaboraí utilities	G&P	763	839	76
		1,710	1,879	169

(*) 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.

25.1.5. 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.

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25.2. Assets classified as held for sale

Asset or CGU by nature (*)	Carrying amount	Recoverable amount (**)	Impairment (losses) / reversals	Business segment
Thermoelectric power plants	91	12	(79)	2021
Investment in Breitener	107	44	(67)	G&E
Oil and gas production and drilling equipment in Brazil	47	-	(46)	E&P
Refineries and associated logistics assets	255	218	(37)	RT&M
Others			5	
Total			(224)	
Producing properties relating to oil and gas activities	-	279	67	2020
Cartola and Ataulfo Alves vessels	80	19	(62)	RT&M
Others			10	
Total			15	
Producing properties - Pampo and Enchova fields	328	808	494	2019
Producing properties - Frade field	19	105	84	E&P
Producing properties - Maromba field	-	68	67	E&P
PO&G BV	444	354	(89)	E&P
Others	592	468	(521)	Several
Total			35	

(*) 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 assets held for sale, for which is used fair value.

In 2021, the Company recognized losses on assets held for sale, in the amount of US\$ 224, arising from the assessment at the fair value of assets, net of disposal expenses, mainly due to:

- Camaçari power plants – following the closing of the sale of thermoelectric power plants Arembepe, Muryci and Bahia 1, located in Camaçari, in the state of Bahia, these assets were measured at fair value net of selling expenses, and a US\$ 79 impairment loss was accounted for in the second quarter of 2021.
- Breitener Energética S.A – following the sale of this company, in the state of Amazonas, Petrobras recognized a US\$ 67 loss;
- Oil and gas production and drilling equipment in Brazil: approval for the disposal of P-32 platform, resulting in the recognition of US\$ 46 losses; and
- Refineries and associated logistics assets: following the approval for the sale of refinery Isaac Sabbá (REMAN), in the state of Amazonas, a US\$ 12 impairment loss was recognized, and of the refinery Shale Industrialization Unit (SIX), in the state of Paraná, a US\$ 25 impairment loss was recognized.

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.

These reversals were partially offset by a US\$ 62 impairment loss relating to Cartola and Ataulfo Alves vessels.

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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).

The accounting policy for assets and liabilities held for sale is set out in note 31.

25.3. 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.

25.3.1. 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.

25.3.2. Investment in publicly traded associates

a) 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\$ 2,943 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 6.2% p.a., (WACC), and decreases in the EBITDA margin during the growth cycle of the petrochemical industry in the next years and increases in the long-term. Estimated exchange rates and Brent prices are the same as those set out in note 27.1.1.

On December 16, 2021, Petrobras' Board of Directors approved the model for the sale of up to 100% of its preferred shares of Braskem, to be conducted through a secondary public offering (follow-on), according to an agreement entered into with Novonor (Braskem's parent company).

On January 17, 2022, Petrobras filed a follow-on request with the CVM. However, on January 28, 2022, the offer was canceled due to unstable market conditions, which resulted in demand and price levels unfavorable for the transaction.

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b) Petrobras Distribuidora S.A. (renamed Vibra Energia S.A.)

On August 26, 2020, the Company's Board of Directors approved the disposal of the remaining interest in this associate.

Accordingly, it was tested for impairment, when the recoverable value of this investment took into account the value in use, including the disposal value, considering the intention to sell the shares. As the value in use of this investment was lower than the book value, an impairment loss of US\$ 144 was recognized in the third quarter of 2020. The post-tax discount rate in constant currency applied was 11.1% p.a., considering the cost of equity.

On June 30, 2021, the Company's Board of Directors approved the price per common share of BR Distribuidora in the amount of US\$ 5.20 (R\$ 26.00) for the secondary public offering (follow on) of these shares, totaling US\$ 2,252 (R\$ 11,264 million), net of transaction costs.

Accordingly, considering the sale of the shares and the cash flows arising from this sale, a US\$ 404 impairment reversal was accounted for within results of equity-accounted investments, in the second quarter of 2021. The transaction was closed on July 5, 2021 (note 31.2).

25.3.3. Investments in state-controlled natural gas distributors

On July 28, 2021, management approved the sale of its entire interest (51%) in Petrobras Gás S.A. – Gaspetro (see note 31.1), which holds interests in 19 companies that explore with exclusivity natural gas distribution in several Brazilian states. This investment was classified as held for sale, with no indication of impairment losses.

25.3.4. Impairment losses in other equity-accounted investments

In 2021, the Company recognized impairment losses in other equity-accounted investments the amount of US\$ 21. In 2020, the Company recognized impairment losses amounting to US\$ 59, 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. In 2019, the Company recognized a US\$ 4 loss relating to other equity-accounted investments.

26. Exploration and evaluation of oil and gas reserves

The exploration and evaluation activities include the search for oil and gas reserves from the date of 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 (*)	2021	2020
Property plant and equipment		
Opening Balance	3,024	4,262
Additions	459	428
Write-offs	(188)	(197)
Transfers	(1,097)	(494)
Cumulative translation adjustment	(204)	(975)
Closing Balance	1,994	3,024
Intangible Assets (**)	2,576	14,526
Capitalized Exploratory Well Costs / Capitalized Acquisition Costs	4,570	17,550

(*) Amounts capitalized and subsequently expensed in the same period have been excluded from this table.

(**) The amount of the signature bonuses paid in the Surplus Oil of Transfer of Rights Agreement was transferred from intangible assets to property, plant and equipment after the Búzios Co-participation Agreement came into effect, as described in Note 24.1.

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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:

	2021	2020	2019
Exploration costs recognized in the statement of income			
Geological and geophysical expenses	358	296	477
Exploration expenditures written off (includes dry wells and signature bonuses)	248	456	308
Contractual penalties	47	38	4
Other exploration expenses	34	13	10
Total expenses	687	803	799
Cash used in:			0
Operating activities	393	307	485
Investment activities	555	532	17,265
Total cash used	948	839	17,750

Exploration expenditures written off arise from projects without economic feasibility. In 2021, write-offs were mainly related to exploratory wells in the concessions of Golfinho and Marlim Leste and in the Campos and Potiguar basins.

In 2021, the Company recognized provisions arising from potential contractual penalties for non-compliance with minimum percentages of local content in 158 blocks for which the exploratory phases were concluded (186 blocks in 2020).

26.1. 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.
- 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 24.
- 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 26.2).
- 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.

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26.2. 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 (*)	2021	2020
Exploratory well costs capitalized for a period of one year	136	118
Exploratory well costs capitalized for a period greater than one year	1,858	2,906
Total capitalized exploratory well costs	1,994	3,024
Number of projects relating to exploratory well costs capitalized for a period greater than one year	22	38
	Capitalized costs (2021)	Number of wells
2020	49	2
2017	39	1
2016 and previous years	1,770	31
Exploratory well costs that have been capitalized for a period greater than one year	1,858	34

(*) Amounts paid for obtaining rights and concessions for exploration of oil and gas (capitalized acquisition costs) are not

Exploratory well costs that have been capitalized for a period greater than one year since the completion of drilling relate to 22 projects comprising (i) US\$ 1,858 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\$ 415 relate to costs incurred to evaluate the reserves and their potential development.

27. 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\$ 1,574 (US\$ 1,631 as of December 31, 2020) of which US\$ 1,574 were still in force as of December 31, 2021 (US\$ 1,543 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\$ 1,243 (US\$ 1,256 as of December 31, 2020) and bank guarantees of US\$ 331 (US\$ 287 as of December 31, 2020).

28. 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, 2021, the Company holds interests in 85 partnerships with 37 companies, among which Petrobras is the operator in 55 (in 2020, 98 partnerships with 40 companies and operator in 55). There were no new partnerships signed in 2021. The partnerships formed in 2020 are described below:

Consortium	Location	% Petrobras	% Partners	Operator	Year	Additional Information	ANP Bonus Petrobras portion (")
ARAM (*)	Santos basin	80%	CNODC – 20%	Petrobras	2020	Production sharing	496
BT-SEAL-13A	Sergipe	50%	Petrogal – 50%	Petrogal	2020	Concession – split	N/A
	Alagoas basin						
BÚZIOS – ECO (*)	Santos basin	90%	CNODC – 5% CNOOC – 5%	Petrobras	2020	Production sharing	14,985
C-M-477	Campos basin	70%	BP Energy do Brasil – 30%	Petrobras	2020	Concession	N/A

(*) The bonuses referring to Aram and Búzios were paid in 2019, the year in which the respective rounds were held - First Round of Bidding for Surplus Transfer of Rights and 6th Round of Bidding in the Production Sharing Regime.

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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%	756.0	Concession
BÚZIOS – ECO	Santos basin	90%	CNODC – 5% CNOOC – 5%	150.8	Production sharing
Roncador	Campos basin	75%	Equinor – 25%	116.1	Concession
Sapinhoá (BMS-9)	Santos basin pre-salt	45%	Shell – 30% Repsol Sinopet – 25%	114.8	Concession
Tartaruga Verde	Campos basin	50%	Petronas – 50%	43.0	Concession
Sururu	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	26.2	Concession
Albacora Leste	Campos basin	90%	Repsol Sinopet – 10%	24.9	Concession
Berbigão	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	18.7	Concession
Mero	Santos basin pre-salt	40%	Total – 20% Shell – 20% CNODC – 10% CNOOC – 10%	10.4	Production sharing
Oeste de Atapu	Santos basin pre-salt	42.5%	Shell – 25% Total – 22.5% Petrogal – 10%	10.4	Concession
Total				1271.3	

28.1. 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; and iv) 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.

28.2. Unitization Agreements

Petrobras has Production Individualization Agreements (AIP) signed in Brazil with partner companies in E&P consortia, as well as contracts resulting from divestment operations and strategic partnerships related to these consortia. These agreements result in reimbursements payable to (or receivable from) partners regarding expenses and production volumes mainly related to Berbigão, Sururu, Albacora Leste, Tartaruga Verde and Mero.

Berbigão, Sururu, Albacora Leste and others

The table below presents changes in the reimbursements payable relating to these fields:

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	12.31.2021	12.31.2020
Opening balance	370	113
Additions/(Write-offs) on PP&E	(64)	278
Payments made	-	(17)
Other income and expenses	84	11
Cumulative translation adjustments	(26)	(15)
Closing balance	364	370

As of December 31, 2021, Petrobras has reimbursements payable amounting to US\$ 364 (US\$ 370 on December 31, 2020). In 2021, these agreements resulted in additions and write-offs in PP&E, in addition to other income and expenses, reflecting the best available estimate of the assumptions used in the calculation base and the sharing of assets in areas to be equalized.

Agreements concluded

a) Mero, Alagamar, Upanema, Brava and pre-salt of Albacora

In December 2021, several Agreements for the Equalization of Expenses and Volumes (AEGV) were signed with the partners Shell, Total, Sonangol, CNODC and CNOOC and PPSA, referring to the Mero, Alagamar, Upanema, Brava and Pre-Salt of Albacora, which resulted in the total amount receivable of US\$ 86, of which US\$ 8 was recognized within other income and expenses in 2021.

In the AEGV relating to Mero, Brava and Albacora pre-salt layer, the PPSA, representing the Brazilian Federal Government, will pay US\$ 79 to Petrobras through a share of production over the next years. Regarding the pre-salt of Albacora, the settlement will begin after the approval of the unitization agreement by the ANP.

28.3. 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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29. Investments

29.1. Information on direct subsidiaries, joint arrangements and associates

	Main business segment	% Petrobras' ownership	% Petrobras' voting rights	Share-holders' equity (deficit)	Net income (loss) for the year	Country
Subsidiaries						
Petrobras International Braspetro - PIB BV	Several	100.00	100.00	48,950	1,896	Netherlands
Petrobras Transporte S.A. - Transpetro	RT&M	100.00	100.00	1,104	226	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100.00	100.00	67	260	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51.00	51.00	405	46	Brazil
Petrobras Biocombustível S.A.	Corporate, others	100.00	100.00	215	(45)	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	26	4	Brazil
Termomacaé S.A.	Gas & Power	100.00	100.00	88	10	Brazil
Braspetro Oil Services Company - Brasoil	Corporate, others	100.00	100.00	111	1	Cayman
Termobahia S.A.	Gas & Power	98.85	98.85	106	6	Brazil
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	50	(4)	Brazil
Petrobras Comercializadora de Energia S.A.. - PBEN	Gas & Power	100.00	100.00	12	6	Brazil
Fundo de Investimento Imobiliário RB Logística - FI	E&P	99.20	99.15	9	7	Brazil
Procurement Negócios Eletrônicos S.A.	Corporate, others	72.00	49.00	6	3	Brazil
Petrobras Comercializadora de Gás e Energia e Participações S.A.	Corporate, others	100.00	100.00	-	-	Brazil
Transportadora Brasileira Gasoduto Bolívia - Brasil S.A.	Gas & Power	51.00	51.00	60	150	Brazil
Refinaria de Canoas S.A. (i)	RT&M	100.00	100.00	-	-	Brazil
Paraná Xisto S.A. (i)	RT&M	100.00	100.00	-	-	Brazil
Refinaria de Mucuripe S.A (i)	RT&M	100.00	100.00	-	-	Brazil
Refinaria de Manaus S.A. (i)	RT&M	100.00	100.00	-	-	Brazil
Associação Petrobras de Saúde	Corporate, others	93.47	93.47	89	-	Brazil
Joint operations						
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50.00	50.00	52	22	Brazil
Ibiritermo S.A.	Gas & Power	50.00	50.00	13	4	Brazil
Joint ventures						
Logum Logística S.A.	RT&M	30.00	30.00	159	(21)	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	21	46	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33.20	33.33	7	-	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	13	3	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	(4)	(22)	Brazil
Metanor S.A. - Metanol do Nordeste	RT&M	34.54	50.00	15	6	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45.00	45.00	-	-	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOS	Corporate, others	50.00	50.00	-	-	Brazil
Associates						
Braskem S.A. (ii)	RT&M	36.15	47.03	2,287	2,501	Brazil
UEG Araucária Ltda.	Gas & Power	18.80	18.80	107	86	Brazil
Deten Química S.A.	RT&M	27.88	28.56	143	91	Brazil
Energética SUAPE II S.A.	Gas & Power	20.00	20.00	82	55	Brazil
Nitrocolor Produtos Químicos LTDA.	RT&M	38.80	38.80	-	-	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00	-	-	Brazil
Transportadora Sulbrasileira de Gás - TSB	Gas & Power	25.00	25.00	2	1	Brazil

(i) Companies legally established, with capital contribution of US\$ 58 thousand for each company.

(ii) Equity and net income at September 30, 2021, most current public information.

In 2021, the Company sold some equity interests, including the following significant divestments:

- Nova Transportadora do Sudeste S.A. (NTS) – selling of the remaining interest of 10%;
- Petrobras Distribuidora S.A. (BR), now Vibra Energia S.A. – selling of the remaining interest of 37.5%;
- Refinaria de Mataripe S.A., company that owns the Landulpho Alves Refinery (RLAM) and its associated logistics assets in the state of Bahia - sale of 100% of the shares.

For more information on the operations mentioned above and other corporate transactions, see note 31;

The main investees of PIB BV are:

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- 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 trading and E&P activities (MP Gulf of Mexico, LLC); and
- PNBV (100%, based in the Netherlands), operates through joint operations in Tupi BV (67.59%), Guará BV (45%), Agri Development BV (90%), Libra (40%), Papa Terra BV (62.5%), Roncador BV (75%), Iara BV (90.11%), Petrobras Trade Inversiones SA (100%) and BJOOS BV (20%), dedicated to the construction and lease of equipment and platforms for Brazilian E&P consortia.

29.2. Investments in associates and joint ventures

	Balance at 12.31.2020	Investments	Transfer to assets held for sale	Restructuring, capital decrease and others	Results in equity- accounted investments	CTA	OCI	Dividends	Balance at 12.31.2021
Joint Ventures	813	9	(325)	-	202	1	(1)	(190)	509
MP Gulf of Mexico, LLC/PIB BV	366	-	-	-	122	1	-	(102)	387
State natural gas distributors (Gaspetro)	298	-	(308)	-	38	(2)	-	(26)	-
Compañía Mega S.A. - MEGA	82	-	-	-	31	2	-	(17)	98
Petrochemical joint ventures	-	-	-	-	(23)	23	-	-	-
Other joint ventures	67	9	(17)	-	34	(23)	(1)	(45)	24
Associates	2,455	15	(2,139)	(172)	1,405	(32)	23	(557)	998
Nova Transportadora do Sudeste	176	-	-	(176)	18	(3)	-	(15)	-
BR (current Vibra Energia)	1,862	-	(2,129)	-	450	(62)	-	(121)	-
Others Associates (*)	417	15	(10)	4	937	33	23	(421)	998
Other investments	5	-	-	-	-	(2)	-	-	3
Total	3,273	24	(2,464)	(172)	1,607	(33)	22	(747)	1,510

(*) It includes Braskem.

29.3. Investments in non-consolidated listed companies

	Thousand-share lot		Type	Quoted stock exchange prices (US\$ per share)		Fair value	
	12.31.2021	12.31.2020		12.31.2021	12.31.2020	12.31.2021	12.31.2020
Associate							
Braskem S.A.	212,427	212,427	Common	10.17	4.85	2,160	1,031
Braskem S.A.	75,762	75,762	Preferred A	10.33	4.54	782	344
						2,942	1,375

The fair value of these shares does not necessarily reflect the realizable value upon sale of a large block of shares.

Information on the main estimates used in the cash flow projections to determine the value in use of Braskem is set out in Note 25.

29.4. Non-controlling interest

The total amount of non-controlling interest at December 31, 2021 is US\$ 405 (US\$ 528 in 2020) primarily comprising US\$ 199 of Gaspetro (US\$ 213 in 2020), US\$ 165 of FIDC (US\$ 192 in 2020), and US\$ 29 of Transportadora Brasileira Gasoduto Brasil-Bolívia – TBG (US\$ 39 in 2020) and Consolidated Structured Entities (US\$ 65 in 2020).

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Condensed financial information is set out as follows:

	Consolidated				FIDC	TBG		
	Gaspetro	Structured entities (*)	2021	2020				
	2021	2020	2021	2020	2021	2020	2021	2020
Current assets	462	81	-	897	11,969	3,951	134	228
Long-term receivables	-	50	-	460	-	-	-	-
Investments	-	298	-	-	-	-	-	-
Property, plant and equipment	-	-	-	-	-	-	279	313
Other non-current assets	-	53	-	1	-	-	2	3
	462	482	-	1,358	11,969	3,951	415	544
Current liabilities	58	25	-	1,043	4	1	109	206
Non-current liabilities	-	23	-	132	-	-	246	257
Shareholders' equity	404	434	-	183	11,965	3,950	60	81
	462	482	-	1,358	11,969	3,951	415	544
Sales revenues	132	83	-	-	-	-	327	310
Net income	47	64	(133)	(195)	454	416	150	111
Increase (decrease) in cash and cash equivalents	7	(4)	(333)	227	(315)	2	42	25

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. On July 28, 2021, the Company signed a contract for the sale of its entire interest in Gaspetro. For more information see note 31.

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). On January 5, 2021, Petrobras acquired 100% of shares of the structured entity Companhia de Desenvolvimento e Modernização de Plantas Industriais (CDMPI) for US\$ 9 thousand. On December 28, 2021, PIB BV acquired 100% of shares of Charter Development LLC - CDC for one Dollar.

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.

29.5. 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:

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	2021				2020			
	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	832	425	253	7,308	795	277	137	9,968
Non-current assets	371	203	11	2,334	385	259	4	3,941
Property, plant and equipment	461	2,683	195	6,845	492	2,380	62	9,914
Other non-current assets	460	1	1	539	482	2	-	761
	2,124	3,312	460	17,026	2,154	2,918	203	24,584
Current liabilities	728	324	126	4,632	573	228	58	7,279
Non-current liabilities	517	623	36	10,967	661	789	17	15,246
Shareholders' equity	874	1,979	196	1,688	887	1,535	81	2,358
Non-controlling interest	5	386	102	(261)	33	366	47	(299)
	2,124	3,312	460	17,026	2,154	2,918	203	24,584
Sales revenues	2,947	1,138	-	20,625	2,056	748	-	28,425
Net Income (loss) for the year	156	635	91	2,821	93	(607)	9	(241)
Ownership interest - %	20 to 83%	20%	34 to 45%	18.8 to 38%	23.5 to 83%	20%	34 to 45%	4.59 to 40%

(*) In 2021, balance mainly composed by Braskem.

29.6. 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.

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.

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.

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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 of 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.

30. Assets by operating segment

The segmented information reflects the decision-making process for resource allocation and performance evaluation carried out by the Company's Board of Executive Officers (as Chief Operating Decision Makers).

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	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Corporate and other business	Elimina- tions	Total
Consolidated assets by operating segment - 12.31.2021						
Current assets	6,034	12,691	3,838	13,259	(5,673)	30,149
Non-current assets	107,112	21,697	6,751	8,639	-	144,199
Long-term receivables	5,042	2,212	322	6,758	-	14,334
Investments	393	970	119	28	-	1,510
Property, plant and equipment	99,033	18,419	6,241	1,637	-	125,330
Operating assets	87,210	16,086	3,739	1,373	-	108,408
Under construction	11,823	2,333	2,502	264	-	16,922
Intangible assets	2,644	96	69	216	-	3,025
Total Assets	113,146	34,388	10,589	21,898	(5,673)	174,348
Consolidated assets by operating segment - 12.31.2020						
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
Total Assets	120,280	32,049	10,296	30,810	(3,425)	190,010

Accounting practices for segment information are described in note 12 – Net Income by Operating Segment.

31. 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:

	E&P	RT&M	Gas & Power	Corporate and other business	12.31.2021	12.31.2020
				Total	Total	Total
Assets classified as held for sale						
Cash and cash equivalents	-	-	13	-	13	14
Trade receivables	-	-	31	-	31	24
Inventories	-	68	5	-	73	4
Investments	-	-	210	-	210	68
Property, plant and equipment	1,841	134	-	-	1,975	640
Others	-	1	187	-	188	35
Total	1,841	203	446	-	2,490	785
Liabilities on assets classified as held for sale						
Trade payables	-	-	2	-	2	22
Finance debt	-	-	-	1	1	13
Provision for decommissioning costs	833	-	-	-	833	640
Others	-	-	31	-	31	10
Total	833	-	33	1	867	685

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31.1. Transactions pending closing at December 31, 2021

The assets and liabilities corresponding to the transactions pending closing are classified as held for sale at December 31, 2021, as follows:

Transaction	Acquirer	Date of approval / signing	Transaction amount (*)	Further information
Sale of the Company's entire interest in Fazenda Belem and Icapuí onshore fields (Fazenda Belem group of fields), located in Potiguar basin, in the state of Ceará	SPE Fazenda Belém S.A., a wholly owned subsidiary of 3R Petroleum e Participações S.A.	August 2020	35	a
Sale of the Company's entire interest in Recôncavo group of 14 onshore fields, in the state of Bahia	Ouro Preto Energia Onshore S.A., a wholly owned subsidiary of 3R Petroleum Óleo e Gás S.A.	December 2020	250	b
Sale of E&P assets in the state of Espírito Santo (Polo Peroá)	DBO Energy and OP Energy (renamed 3R Offshore)	January 2021	13	c
Sale of the Company's entire interest in a set of seven onshore and shallow water fields called Alagoas group, and of Alagoas Natural Gas Processing Unit, in the state of Alagoas	Petromais Global Exploração e Produção S.A. (renamed Origem Energia S.A.)	June 2021	300	d
Sale of the Company's 62,5% interest in Papa-Terra field, in the Campos basin	3R Petroleum Offshore S.A.	July 2021	16	e
Sale of the Company's entire interest (51%) in Petrobras Gas S.A (Gaspetro)	Compass Gas e Energia S.A.	July 2021	373 (R\$ 2,030 million)	f
Sale of shares of the company that will hold the Isaac Sabbá Refinery (REMAN) and its associated logistics assets, in the state of Amazonas	Ream Participações S.A. (a company controlled by the partners of Atem Distribuidora de Petróleo S.A.)	August 2021	190	g
Exercise of the call option for additional 5% interest in the surplus volume of the Transfer of Rights Agreement of Búzios field	CNOOC Petroleum Brasil Ltda (CNOOC)	September 2021	2,080	h
Sale of shares of the company that will hold the Shale Industrialization Unit (SIX), in the state of Paraná.	Forbes & Manhattan Resources Inc., a wholly owned subsidiary of Forbes & Manhattan Inc.	November 2021	33	i
Sale of the Company's entire interest in 11 onshore production fields (Carmópolis group of fields), including integrated facilities, in the state of Sergipe	Carmo Energy S.A.	December 2021	1,100	j

a) Sale of Fazenda Belem group of onshore fields

The agreement provides for the receipt of US\$ 9 at the transaction signing, US\$ 16 at the transaction closing, and US\$ 10 to be received one year after the closing. This transaction is subject to price adjustments and conditions precedent, such as approval by the ANP.

b) Sale of Recôncavo group of onshore fields

The agreement provides for the receipt of US\$ 10 at the transaction signing, and US\$ 240 at the transaction closing, subject to price adjustments and conditions precedent, such as approval by the ANP.

c) Sale of E&P assets of Peroá group of fields

Amounts due to Petrobras are composed of: (i) US\$ 5 was received at the contract signing; (ii) US\$ 8 to be received at the transaction closing; (iii) up to US\$ 42 as contingent receivables 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 Brazilian Agency of Petroleum, Natural Gas and Biofuels (ANP).

d) Sale of Alagoas group of onshore and shallow water fields, and of a natural gas processing unit in the state of Alagoas

The agreement provides for the receipt of US\$ 60 at the transaction signing and US\$ 240 at the transaction closing, subject to price adjustments and conditions precedent, such as approval by the ANP.

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e) Sale of Papa-Terra field

The agreement provides for the receipt of US\$ 6 at the transaction signing and US\$ 10 at the transaction closing, subject to price adjustments and conditions precedent, such as approval by the ANP. In addition, there is a total of US\$ 90 in contingent receivables provided for in the contract (contingent assets), related to production volume of the asset and future oil prices.

f) Sale of Gaspetro

The payment to Petrobras of US\$ 373 (R\$ 2,030 million) will be made at the transaction closing, subject to price adjustments and the fulfillment of certain conditions precedent, such as approval by the Administrative Council for Economic Defense (CADE). In addition, until closing, Petrobras will comply with the provisions contained in the shareholders' agreements of Gaspetro and natural gas distributors, including preemptive rights.

g) Sale of REMAN refinery assets

The agreement provides for the receipt of US\$ 29 at the transaction signing and US\$ 161 at the transaction closing, subject to price adjustments and conditions precedent, such as approval by the CADE.

h) Exercise of the call option in Búzios field

For more information, see note 24.1.

i) Sale of interest in SIX shale processing plant

The agreement provides for (i) US\$ 3 received at the transaction signing, and (ii) US\$ 30 to be received at the transaction closing, subject to price adjustments and contingent payments (earn out). The transaction is subject to the fulfillment of conditions precedent, such as approval by CADE and ANP.

j) Sale of Carmópolis group of onshore fields

The agreement provides for (i) US\$ 275 received in January 2022, (ii) US\$ 550 to be received at the transaction closing, and (iii) US\$ 275 to be received one year after the closing.

The transaction is subject to price adjustments and to the fulfillment of conditions precedent, such as approval by CADE and ANP.

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31.2. Closed transactions in 2021

Transaction	Acquirer	Signature date (S) Closing date (C)	Sale amount (*)	Gain/ (loss) (**)	Further informa- tion
Sale of 30% of the Trade field concession. The transaction also includes the sale of the entire stake held by the subsidiary Petrobras Trade Inversiones S.A. (PFISA), in the company Trade BV	PetroRio	November 2019 (S) February 2021 (C)	44	88	a
Sale of the Company's entire interest in Petrobras Uruguay Distribución S.A. (PUDSA)	DISA Corporación Petrolífera S.A.	August 2019 (S) February 2021 (C)	68	(3)	b
Petrobras Biocombustível S.A. (PBio) 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 (S) February 2021 (C)	47 (R\$ 253 million)	(1)	c
Sale of the Company's entire interest (49%) in companies Eólica Mangue Seco 1, 3 and 4, wind power generation plants, in the state of Rio Grande do Norte	V2I Transmissão de Energia Elétrica S.A.	December 2020 (S) April 2021 (C)	26 (R\$ 145 million)	19	d
Sale of the Company's remaining 10% interest in NTS	Nova Infraestrutura Gasodutos Participações S.A.	April 2021 (S and C)	277 (R\$ 1,539 million)	109	e
Sale of the Company's entire interest (51%) in company Eólica Mangue Seco 2, a wind power generation plant, in the state of Rio Grande do Norte	Fundo de Investimento em Participações Multiestatégia Pirineus (FIP Pirineus)	February 2021 (S) May 2021 (C)	6 (R\$ 34 million)	4	f
Sale of the Company's entire interest in eight onshore fields, called Rio Ventura group, located in the state of Bahia	3R Rio Ventura S.A., subsidiary of 3R Petroleum e Participações S.A.	August 2020 (S) July 2021 (C)	97	109	g
Sale of the Company's remaining 37.5% interest in BR Distribuidora (renamed Vibra Energia)	Several (public offering)	June 2021 (S) July 2021 (C)	2,203 (R\$ 11,358 million)	-	h
Transfer of the Company's remaining 10% interest in Lapa field and in Lapa Oil & Gas BV	TotalEnergies	December 2018 (S) August 2021 (C)	49	13	i
Sale of the Company's 40% interest in the company GNL Gemini Comercialização e Logística de Gás Ltda. (GásLocal)	White Martins Gases Industriais Ltda.	September 2020 (S) September 2021 (C)	12 (R\$ 61 million)	(1)	j
Sale of 100% of the shares of Refinaria Mataripe S.A., controller of Landulpho Alves Refinery - RLAM and its associated logistics assets, in the state of Bahia	MC Brazil Downstream Participações, a company of the Mubadala Capital group	March 2021 (S) November 2021 (C)	1,811	574	k
Sale of the Company's entire interest in Termelétrica Potiguar S.A. - TEP (20%) and in Companhia Energética Manauara S.A. - CEM (40%)	Global Participações Energia S.A., through subsidiaries	July 2021 (S) November 2021 (C)	28 (R\$ 156 million)	4	l
Sale of the Company's entire 93.7% interest in Breitener Energética S.A., in the state of Amazonas	Breitener Holding Participações S.A., a wholly-owned subsidiary of Ceiba Energy LP.	August 2021 (S) November 2021 (C)	35 (R\$ 192 million)	(10)	m
Sale of the Company's entire interest in 9 onshore production fields (Miranga group of fields), in the state of Bahia	SPE Miranga S.A., subsidiary of PetroRecôncavo S.A.	February 2021 (S) December 2021 (C)	154	130	n
Sale of the Company's entire interest in 12 onshore production fields (Remanso group of fields), in the state of Bahia	PetroRecôncavo S.A.	December 2020 (S) December 2021 (C)	16	25	o
Sale of the Company's entire interest in 27 onshore production fields (Cricaré group of fields), in the state of Espírito Santo	Karavan Seacrest SPE Cricaré São Francisco Energia S.A., a subsidiary of Global Participações em	August 2020 (S) December 2021(C)	38	36	p
Sale of three thermoelectric plants powered by fuel oil, located in Camaçari, in the state of Bahia	Global Participações em	May 2021 (S) December 2021(C)	11 (R\$ 61 million)	(25)	q
Total			4,914	1,071	

(*) The amount of "Proceeds from disposal of assets" in the Statement of Cash Flows is composed of amounts received this period, including installments of operations from previous years, and advances referring to operations not completed.

(**) Recognized in "Results on disposal/write-offs of assets and on remeasurement of investment retained with loss of control" within other income and expenses (note 6).

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a) Sale of the Frade field

The transaction was closed with the payment of US\$ 36 to Petrobras, after price adjustments (including cash inflows from the sale of crude oil from the concession), in addition to US\$ 8 paid to Petrobras upon the contract signing. In addition, there is a contingent amount of US\$ 20 linked to a potential new commercial discovery in the field.

The original sale amounting to US\$ 100 was adjusted considering the cash flows arising from the Company's interest in the field from July 1, 2019 (inception date of the negotiation) to February 5, 2021 (closing date). In addition, there is a contingent payment amounting to US\$ 20 subject to a new discovery in the field.

b) Sale of Petrobras Uruguay Distribución S.A. (PUDSA)

The transaction was closed with the payment of US\$ 62 to Petrobras, in addition to US\$ 6 paid upon the contract signing, totaling US\$ 68. As a result of this operation, a US\$ 34 loss was reclassified to the statement of income, within other income and expenses, relating to cumulative translation adjustments arising from exchange rate variations recognized in PUDSA's shareholders' equity since de acquisition of this investment.

c) Sale of BSBios

The transaction was closed with the payment of US\$ 47 to Petrobras, including price adjustments. Moreover, US\$ 12 is held in an escrow account for indemnification of eventual contingencies, to be released according to terms and conditions set forth in the contract.

d) Sale of Mangue Seco 1, 3 and 4

The sale of Mangue Seco 1 was closed with the payment of US\$ 8 to Petrobras, including price adjustments. The sale of Mangue Seco 3 and 4 was closed with the payment of US\$ 14 to Petrobras, including price adjustments, in addition to US\$ 4 received at the signing, totaling US\$ 18.

e) Sale of remaining 10% interest in NTS

The transaction was closed with the payment of US\$ 277 to Petrobras, on the date of signing and closing of the transaction, including price adjustments.

f) Sale of Eólica Mangue Seco 2

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 was closed with the payment of US\$ 6 to Petrobras, including price adjustments.

g) Sale of Rio Ventura group of onshore fields

The operation was concluded in July 2021 with the payment of US\$ 34 to Petrobras, including price adjustments, in addition to US\$ 4 paid to Petrobras at the contract signing.

The agreement provides for further US\$16 to be paid in January 2024 and up to US\$ 44 in contingent payments related to future oil prices, already received in September 2021 (US\$ 22) and in December 2021 (US\$ 22).

h) Sale of remaining 37.5% interest in BR Distribuidora (renamed Vibra Energia)

On June 17, 2021, Petrobras filed a request for registration of a secondary public offering (follow on) of common shares issued by (renamed Vibra Energia), with the release of a preliminary offering prospectus. The Company offered 37.5% of the share capital of BR Distribuidora, corresponding to the remaining interest held by Petrobras.

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On June 30, 2021, Petrobras approved the price per common share of BR Distribuidora in the amount of US\$ 5.20 (R\$ 26.00), totaling US\$ 2,203 (R\$11,358 million). Thus, a US\$ 404 impairment reversal was recognized, as detailed in note 19.

On July 5, 2021, the follow-on was closed with the Company receiving US\$ 2,184, net of transactions costs.

i) Transfer of interest in Lapa field and in Lapa BV

In 2018, Petrobras exercised its put option, as provided in the contract, transferring its remaining 10% interest in Lapa field to Total Energies, including the remaining 10% interest held by Petrobras Netherlands BV (PNBV) in Lapa BV. In September 2021, the operation was concluded with the payment of US\$ 49 to Petrobras.

In addition, there was a price adjustment relating to the transfer of rights of Lapa and Iara fields by Petrobras, as well as of the interests held by PNBV in Lapa BV and Iara BV, with the recognition of a US\$ 22 gain within other income and expenses.

j) Sale of interest in GásLocal

The agreement resolved controversies arising from the activities of the Gemini consortium and GasLocal, in particular pending arbitration and judicial proceedings. It also provides for the commercial conditions for the supply of gas by Petrobras, as an integrant of Gemini consortium, until the end of 2023, as required by CADE.

The transaction was closed with the payment of US\$ 11 (R\$56 million) to Petrobras upon the signing of the agreement, and US\$ 1 (R\$ 4.6 million), to be paid up to 13 months from the closing of the agreement.

k) Sale of RLAM refinery assets

The transaction was closed in November 2021 after the payment of US\$ 1,811 to Petrobras, including price adjustments provided for in the contract, arising from changes in working capital, net debt and investments until the transaction closing.

l) Sale of interest in electricity companies

The total payment to Petrobras will be made at the transaction closing, US\$ 14 from each of the two acquirers, totaling US\$ 28.

m) Sale of the Company's interest in Breitener Energética

The transaction was closed in November 2021 after the payment of US\$ 45 to Petrobras, including price adjustments provided for in the contract. In addition, there is a contingent amount of US\$ 9 depending on future sales revenues of the plant.

n) Sale of Miranga group of onshore fields

The transaction was closed in December 2021 after the payment of US\$ 48 to Petrobras, in addition to US\$ 11 received upon the contract signing.

The agreement also provides for the receipt of US\$ 80, deferred in three installments over three years from the transaction closing, and up to US\$ 85 in contingent receivables related to future average Brent prices. Of this amount, in December 2021 the Company met the agreed conditions for the receipt of US\$ 15, recognized within other income and expenses.

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o) Sale of Remanso group of onshore fields

The transaction was closed in December 2021 after the payment of US\$ 7 to Petrobras, in addition to US\$ 4 received upon the contract signing.

The agreement also provides for the receipt of US\$ 5 in December 2022, subject to price adjustments.

p) Sale of Cricaré group of onshore fields

The transaction was closed in December 2021 after the payment of US\$ 27 to Petrobras, in addition to US\$ 11 received upon the contract signing.

The agreement provides for up to US\$ 116 in contingent payments related to future oil prices.

q) Sale of three thermoelectric plants in Camaçari

The transaction was closed in December 2021 after the payment of US\$ 11 to Petrobras.

31.3. Other operation

On January 5, 2021, Petrobras acquired 100% of shares of the structured entity Companhia de Desenvolvimento e Modernização de Plantas Industriais (CDMPI) for US\$ 9 thousand. On December 28, 2021, Petrobras acquired 100% of shares of the structured entity Charter Development LLC (CDC) for US\$ 1 dollar.

The difference between the amount paid and the shareholders' equity of this structured entities was recorded as a capital transaction, increasing the shareholders' equity attributable to shareholders of Petrobras, while increasing non-controlling interests, in the amount of US\$ 79, since Petrobras already controlled its operations and consolidated this structured entities prior to these transactions.

31.4. Contingent assets from disposed investments – transactions closed in previous years

31.4.1. Pampo and Enchova

In July 2020, Petrobras closed the sale of its entire interest in Pampo and Enchova groups of fields to Trident Energy do Brasil Ltda (see note 33.2 of the annual consolidated financial statements for 2020), with additional conditions providing for the payment to Petrobras of amounts of up to US\$ 650 classified as contingent assets, to be recognized when the agreed conditions, relating to Brent prices, are met. Of this amount, the Company has already recognized US\$ 36, within other income and expenses. The contract provides for revaluations until 2030.

31.4.2. Contingent installment of the exploratory block BM-S-8 sale

On July 28, 2016, the Company disposed its 66% interest in the exploratory block BM-S-8 to Equinor Brasil Energia Ltda, which includes the Bacalhau field (former Carcará) located in the pre-salt layer of Santos basin, for the amount of US\$ 2,500, to be paid in three installments, of which the last two were contingent payments to Petrobras.

The first installment (US\$ 1,250) was received on November 22, 2016, and the second installment (US\$ 300) on March 21, 2018.

On December 9, 2021, the ANP approved the Production Individualization Agreement (AIP) for the Bacalhau and Norte de Bacalhau fields, the condition for the receipt by Petrobras of the final installment, in the amount of US\$ 950. This gain was recognized in the statement of income in December 2021, within other income and expenses, and received in February 2022.

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31.5. Cash flows from sales of interest with loss of control

In 2021, 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:

	Cash received	Cash in subsidiary before losing control	Net Proceeds
Jan-Dec/2021			
Mataripe refinery - RLAM	1,868	(119)	1,749
PUDSA	62	(15)	47
Total	1,930	(134)	1,796
Jan-Dec/2020			
Petrobras Oil & Gas B.V.(PO&GBV)	276	-	276
Liquigas	784	(10)	774
Total	1,060	(10)	1,050
Jan-Dec/2019			
Petrobras Paraguay	381	(45)	336
Total	381	(45)	336

31.6. 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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32. Finance debt

32.1. Balance by type of finance debt

	12.31.2021	12.31.2020
In Brazil		
Banking Market	1,237	5,016
Capital Market	2,504	2,512
Development banks (*)	769	1,315
Others	7	11
Total	4,517	8,854
Abroad		
Banking Market	8,525	13,581
Capital Market	19,527	27,625
Development banks (*)	-	201
Export Credit Agency	2,951	3,424
Others	180	203
Total	31,183	45,034
Total finance debt	35,700	53,888
Current	3,641	4,186
Non-current	32,059	49,702

(*) It includes BNDES, FINAME, FINEP and New Development Bank (NDB)

Current finance debt is composed of:

	12.31.2021	12.31.2020
Short-term debt	108	1,140
Current portion of long-term debt	3,063	2,383
Accrued interest on short and long-term debt	470	663
Total	3,641	4,186

The capital market balance is mainly composed of US\$ 18,823 in global notes, issued by PGF and US\$ 2,352 in debentures issued in reais in Brazil. The balance in global notes has maturities between 2024 to 2115 and does not require collateral. Such financing was carried out in dollars, euros and pounds, 87%, 3% and 10%, of the total global notes, respectively.

The debentures, with maturities between 2024 and 2034 and without guarantees, are not convertible into shares.

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32.2. Changes in finance debt and reconciliation with cash flows from financing activities

	Balance at 12.31.2019	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	(2,474)	-	- 8,853
Abroad	52,530	15,535	(23,471)	(2,967)	3,187	1,667	(1,201)	(245)	- 45,035
	63,260	17,023	(24,551)	(3,319)	3,586	1,809	(3,675)	(245)	- 53,888
Debt restructuring			(1,176)		-				
Deposits linked to financing			-	162					
Net cash used in financing	(25,727)		(3,157)						

(*) It includes pre-payments.

(**) It includes premium and discount over notional amounts, as well as gains and losses by modifications in contractual cash flows.

	Balance at 12.31.2020	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 12.31.2021
In Brazil	8,853	-	(4,274)	(267)	316	233	(344)	-	- 4,517
Abroad	45,035	1,885	(15,971)	(2,034)	2,407	186	(325)	-	- 31,183
	53,888	1,885	(20,245)	(2,301)	2,723	419	(669)	-	35,700
Debt restructuring			(1,102)		-				
Deposits linked to financing			(66)	72					
Net cash used in financing activities	(21,413)		(2,229)						

(*) It includes pre-payments.

(**) It includes premium and discount over notional amounts, as well as gains and losses by modifications in contractual cash flows.

(***) Deposits linked to financing with China Development Bank (CDB), with semiannual settlements in June and December.

In 2021, the Company used its cash, in addition to raising funds in the international capital market, to pay off older debts and manage liabilities, aiming at improving the debt repayment profile taking into account its alignment with investments returns over the long run.

The Company repaid several finance debts, in the amount of US\$ 23,642 notably: (i) prepayment of banking loans in the domestic and international market totaling US\$ 6,344 and (ii) US\$ 9,840 to repurchase and withdraw global bonds previously issued by the Company in the capital market, with net premium paid to bond holders amounting to US\$ 1,090; and (iii) total prepayment of US\$ 593 for loans with development agencies.

The company raised US\$ 1,442 through bonds issued in the international capital market (Global Notes) maturing in 2051.

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32.3. Summarized information on current and non-current finance debt

Maturity in	Up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 years onwards	Total (**)	Fair Value
Financing in U.S. Dollars (US\$)(*):	2,540	2,564	3,354	2,746	1,686	15,228	28,118	30,063
Floating rate debt	2,154	2,564	2,676	1,934	1,143	897	11,368	
Fixed rate debt	386	-	678	812	543	14,331	16,750	
Average interest rate	5.0%	5.2%	5.5%	5.7%	6.2%	6.6%	6.3%	
Financing in Brazilian Reais (R\$):	1,006	409	620	211	402	1,870	4,518	4,462
Floating rate debt	663	263	263	130	130	496	1,945	
Fixed rate debt	343	146	357	81	272	1,374	2,573	
Average interest rate	5.9%	5.5%	5.0%	4.5%	4.1%	4.6%	4.9%	
Financing in Euro (€):	49	-	14	492	-	664	1,219	1,347
Fixed rate debt	49	-	14	492	-	664	1,219	
Average interest rate	4.7%	-	4.7%	4.7%	-	4.7%	4.7%	
Financing in Pound Sterling (£):	46	-	-	-	744	1,055	1,845	2,019
Fixed rate debt	46	-	-	-	744	1,055	1,845	
Average interest rate	6.2%	-	-	-	6.2%	6.4%	6.3%	
Total as of December 31, 2021	3,641	2,973	3,988	3,449	2,832	18,817	35,700	37,891
Average interest rate	5.2%	5.3%	5.5%	5.6%	5.9%	6.5%	6.2%	
Total as of December 31, 2020	4,186	3,282	5,892	5,961	6,229	28,338	53,888	61,517
Average interest rate	4.6%	4.8%	4.8%	5.1%	5.2%	6.4%	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, 2021 is 13.39 years (11.71 years as of December 31, 2020).

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\$ 20,769 of December 31, 2021 (US\$ 33,236 of December 31, 2020); 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\$ 17,122 as of December 31, 2021 (US\$ 28,281 as of December 31, 2020).

The sensitivity analysis for financial instruments subject to foreign exchange variation is set out in note 36.3.

A maturity schedule of the Company's finance debt (undiscounted), including face value and interest payments is set out as follows:

Maturity	2022	2023	2024	2025	2026	2027 and thereafter	12.31.2021	12.31.2020
Principal	3,171	3,066	4,071	3,524	2,909	19,816	36,557	55,130
Interest	1,806	1,631	1,549	1,381	1,295	22,895	30,557	38,953
Total	4,977	4,697	5,620	4,905	4,204	42,711	67,114	94,083

(*) A maturity schedule of the lease arrangements (nominal amounts) is set out in note 23.

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32.4. Lines of credit

12.31.2021						
Company	Financial institution	Date	Maturity	Available (Lines of Credit)	Used	Balance
Abroad						
PGT BV	Syndicate of banks	12/16/2021	11/16/2026	5,000	-	5,000
PGT BV (*)	Syndicate of banks	3/27/2019	2/27/2024	3,250	-	3,250
Total				8,250	-	8,250
In Brazil						
Petrobras	Banco do Brasil	3/23/2018	9/26/2026	358	-	358
Petrobras	Bradesco	6/1/2018	5/31/2023	358	-	358
Petrobras	Banco do Brasil	10/4/2018	9/5/2025	358	-	358
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	59	-	59
Total				1,133	-	1,133

(*) In April 2021, PGT extended part of the Revolving Credit Facility. As such, US\$ 2,050 will be available for withdrawal from February 28, 2024 until February 27, 2026.

32.5. Covenants and Collateral

32.5.1. Covenants

The Company has covenants that were not in default at December 31, 2021 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.

32.5.2. 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 37.5.

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32.6. Accounting policy for loans and finance debt

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.

Regarding the interest rate benchmark reform (Interbank offered rate - IBOR Reform), the company continues to monitor the standards of the regulatory authorities, as well as the measures that have been adopted, aiming at adapting the various financial instruments to the new benchmarks. Petrobras and its subsidiaries have debts indexed to Libor, corresponding to 32% of total finance debt (see note 32.3).

33. 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 12.31.2020	Remeasure ment / new contracts	Payment of principal and interest (*)	Interest expenses	Foreign exchange gains and losses	Cumulative translation adjustment	Transfers	Balance at 12.31.2021
In Brazil	4,340	1,655	(1,560)	243	151	(272)	47	4,604
Abroad	17,310	4,474	(4,267)	990	1,288	(1,310)	(46)	18,439
Total	21,650	6,129	(5,827)	1,233	1,439	(1,582)	1	23,043

A maturity schedule of the lease arrangements (nominal amounts) is set out as follows:

Nominal Future Payments	up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 years onwards	Total	Recoverable taxes
Without readjustment								
Vessels	2,620	1,644	885	380	243	1,150	6,922	218
Others	110	62	23	13	-	-	208	16
With readjustment - abroad (*)								
Vessels	471	288	276	215	176	186	1,612	-
Platforms	1,700	1,434	1,460	1,414	1,339	11,986	19,333	-
With readjustment - Brazil								
Vessels	361	272	184	101	43	18	979	87
Properties	94	89	90	90	90	869	1,322	9
Others	211	155	109	96	81	399	1,051	16
TOTAL	5,567	3,944	3,027	2,309	1,972	14,608	31,427	346

(*) 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 (%)	Average Period	Recoverable taxes	Closing Balance	Opening Balance
Without readjustment					
Vessels	3,5155	5.4 years	205	6,201	7,462
Others	1,5029	2.5 years	16	202	262
With readjustment - abroad (*)					
Platforms	5,5194	14.6 years	-	13,059	10,747
Vessels	4,3124	4.7 years	-	1,431	1,530
With readjustment - Brazil					
Vessels	6,8752	3.3 years	76	850	794
Properties	8,7184	21.5 years	7	590	643
Others	9,7347	7.9 years	14	710	212
TOTAL	5,2637	11.7 years	318	23,043	21,650

(*) 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, 2021 amounted to US\$ 898, representing 15% in relation to fixed payments (US\$ 785 and 13% in the same period of 2020).

In the year ended December 31, 2021, the Company recognized lease expenses in the amount of US\$ 110 relating to short-term leases (US\$ 118 in the same period of 2020).

At December 31, 2021, the nominal amounts 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\$ 79,557 (US\$ 67,408 at December 31, 2020). The increase in the year ended December 31, 2021 corresponds to new contractual commitment, including 2 floating production units.

The sensitivity analysis of financial instruments subject to exchange variation is presented in note 36.3.

33.1. Accounting policy for lease liabilities

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 36.3).

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. When using underlying assets arising from a specific contract in which the Company is solely responsible for the lease payments, 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.

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34. Equity

34.1. Share capital (net of share issuance costs)

As of December 31, 2021 and December 31, 2020, 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.

34.1.1. Accounting policy for share capital

Share capital comprises common shares and preferred shares. Transaction costs attributable to the issue of new shares (share issuance costs) are presented (net of tax) in shareholders' equity, within capital transactions, as a deduction from the proceeds.

As of December 31, 2021 and December 31, 2020, the Company held treasury shares, of which 222,760 are common shares and 72,909 are preferred shares.

34.2. Capital reserves

Capital reserve comprises treasury shares owned by Petrobras, in the amount of US\$ 2, at December 31, 2021.

34.3. Capital transactions

34.3.1. 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.

34.3.2. 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.

34.3.3. Treasury shares

Shares held in treasury in the amount of US\$ 2, represented by 222,760 common shares and 72,909 preferred shares.

34.4. Profit reserves

34.4.1. Legal reserve

It represents 5% of the net income for the year, calculated pursuant to article 193 of the Brazilian Corporation Law.

34.4.2. 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.

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34.4.3. 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.

In 2021, the amount of US\$ 118 was appropriated from retained earnings to the tax incentive reserve referring to a subsidy incentive for investments, granted from the Superintendencies for Development of the Northeast Region of Brazil (SUDENE) and of the Amazon (SUDAM).

34.4.4. Accounting policy for 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.

34.4.5. 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.

34.5. 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, over and above those required by the Brazilian Corporate Law, approved by the Board of Directors in 2019 and updated in November 2021, defines the following:

- minimum distribution of US\$ 4,000 for fiscal years when the average Brent price exceeds US\$ 40 per barrel, regardless its level of indebtedness. This distribution will be equal to both common and preferred shares, once it exceeds the minimum value for preferred shares provided for in the Company's bylaws;
- in case of gross debt (comprising current and non-current finance debt and lease liability) equal to or less than US\$ 65,000, in addition to the existence of net income attributable to shareholders of Petrobras, to be verified on a quarterly basis, the Company will distribute to shareholders 60% of the difference between net cash provided by operating activities and cash used in the acquisition of PP&E and intangibles assets, calculated in Brazilian reais, provided that the result of this calculation exceeds US\$ 4,000 and does not compromise the financial sustainability of the Company;
- regardless its level of indebtedness, the Company may, in exceptional cases, pay extraordinary dividends, exceeding the minimum mandatory dividend or the values established in the policy, provided that the Company's financial sustainability is preserved;
- the distribution of remuneration to shareholders must be made on a quarterly basis; and

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- the Company may exceptionally distribute dividends even if there is no net income for the year, in accordance with the rules provided for the Brazilian Corporation Law and the criteria defined in this policy.

Petrobras seeks, through its policy on distributions to shareholders, to ensure short, medium and long-term financial sustainability, providing predictability to the dividend payments to shareholders.

34.5.1. Accounting policy for 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 within the statement of financial position. Any excess must be maintained in shareholders' equity, as additional dividends proposed, until its approval on the Annual General Shareholders Meeting.

34.5.2. Proposed dividends

Distribution to shareholders for 2021, proposed by management for approval at the Annual General Shareholders Meeting, amounting to US\$ 18,541, is superior to the minimum mandatory dividend of 25% of the adjusted income and will be paid in equal proportions for common and preferred shares.

Considering the net income for the year and the achievement of the indebtedness target, the amount of dividends proposed by the Company was based on the policy on distribution to shareholders, equivalent to 60% of the difference between net cash provided by operating activities (R\$ 203,126 million) and cash used in the acquisition of PP&E and intangibles assets (R\$ 34,134 million), resulting in a R\$ 101,395 million distribution, which is equivalent to US\$ 18,541 translated based on the exchange rate prevailing at the date of approval for each anticipation and in the closing exchange rate for the complementary dividends.

Payment	Date of Board of Directors approval	Date of register	Date of Payment	Common Shares		Preferred Shares		Total
				Amount	Amount per share	Amount	Amount per share	
1 st installment – dividends	08.04.2021	08.16.2021	08.25.2021	2,300	0.3091	1,731	0.3091	4,031
2 nd installment - interest on capital	08.04.2021	12.01.2021	12.15.2021	1,483	0.1993	1,116	0.1993	2,599
2 nd installment - dividends	10.28.2021	12.01.2021	12.15.2021	2,911	0.3911	2,191	0.3911	5,102
Indexation charges on paid anticipations				69	0.0093	52	0.0093	121
Complementary dividends	02.23.2022	04.13.2022	05.16.2022	3,816	0.5127	2,872	0.5127	6,688
Total for 2021				10,579	1.4215	7,962	1.4215	18,541
Total for 2020				1,128	0.1515	849	0.1515	1,977

Amounts translated into U.S. dollar based on the exchange rate prevailing at the date of the approval, except for the complementary dividends, based on the closing exchange rate at the date of the financial statements.

Distributions to shareholders for 2020 amounted to US\$ 1,977, including 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 that year and the profit retention reserve, considering cash generation in the year and the Company's preserved financial sustainability.

34.5.3. Dividends payable

As of December 31, 2021, there are no dividends payable to shareholders within current liabilities, given that anticipation of dividends have already been paid throughout 2021, while the complementary dividends will be

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maintained in shareholders' equity until its approval on the Annual General Shareholders Meeting. As of December 31, 2020 this balance amounted to US\$ 858.

34.6. Earnings per share

	2021			2020			2019		
	Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	Total
Net income (loss) attributable to shareholders of Petrobras	11,339	8,536	19,875	651	490	1,141	5,791	4,360	10,151
Continuing operations	11,339	8,536	19,875	651	490	1,141	4,370	3,290	7,660
Discontinued operations	-	-	-	-	-	-	1,421	1,070	2,491
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
Basic and diluted earnings (losses) per share - in U.S. dollars	1.52	1.52	1.52	0.09	0.09	0.09	0.78	0.78	0.78
Continuing operations	1.52	1.52	1.52	0.09	0.09	0.09	0.59	0.59	0.59
Discontinued operations	-	-	-	-	-	-	0.19	0.19	0.19
Basic and diluted earnings (losses) per ADS equivalent - in U.S. dollars (*)	3.04	3.04	3.04	0.18	0.18	0.18	1.56	1.56	1.56
Continuing operations	3.04	3.04	3.04	0.18	0.18	0.18	1.18	1.18	1.18
Discontinued operations	-	-	-	-	-	-	0.38	0.38	0.38

(*) 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 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 are identical as the Company has no potentially dilutive shares.

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35. Fair value of financial assets and liabilities

	Level I	Level II	Level III	Total fair value recorded
Assets				
Marketable securities	650	-	-	650
Foreign currency derivatives	-	23	-	23
Balance at December 31, 2021	650	23	-	673
Balance at December 31, 2020	652	115	-	767
Liabilities				
Foreign currency derivatives	-	(271)	-	(271)
Commodity derivatives	(1)	-	-	(1)
Interest rate derivatives	-	(1)	-	(1)
Balance at December 31, 2021	(1)	(272)	-	(273)
Balance at December 31, 2020	(10)	(269)	-	(279)

The estimated fair value for the Company's long-term debt, computed based on the prevailing market rates, is set out in note 32.

Certain receivables are classified as fair value through profit or loss, as presented in note 13.

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.

36. 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.

36.1. 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, 2021, as well as the amounts recognized in the statement of income and other comprehensive income and the guarantees given is set out as follows:

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	Statement of Financial Position				
			Fair value		Maturity
	Notional value	Asset Position (Liability)	12.31.2021	12.31.2020	
Derivatives not designated for hedge accounting					
Future contracts - total (*)	(1,308)	(240)	(1)	(10)	
Long position/Crude oil and oil products	1,380	3,927	-	-	2022
Short position/Crude oil and oil products	(2,688)	(4,167)	-	-	2022
SWAP (**)					-
Short call/Soybean oil (**)	(11)	-	-	-	2022
Forward contracts					
Long position/Foreign currency forwards (GPD/USD) (***)	-	GBP 354	-	23	2021
Swap					
Foreign currency / Cross-currency Swap (***)	GBP 583	GBP 615	23	44	2026
Foreign currency / Cross-currency Swap (***)	GBP 442	GBP 600	(50)	(26)	2034
Swap - IPCA	3,008	R\$ 3,008	(1)	47	2029/2034
Foreign currency / Cross-currency Swap (***)	US\$ 729	US\$ 729	(221)	(244)	2024/2029
Total recognized in the Statement of Financial Position			(250)	(166)	

(*) Notional value in thousands of bbl.

(**) Notional value in thousands of tons.

(***) Amounts in US\$ million.

	Gains/ (losses) recognized in the statement of income		
	2021	2020	2019
Commodity derivatives			
Crude oil - 36.2 (a)	-	(502)	(216)
Gasoline - 36.2 (b)	-	-	11
Diesel - 29.2 (b)	-	-	(12)
Other commodity derivative transactions - 29.2 (b)	(79)	194	(153)
Recognized in Other Income and Expenses	(79)	(308)	(370)
Currency derivatives			
Swap Pounds Sterling x Dollar - 36.3 (b)	(85)	11	(18)
NDF – Euro x Dollar - 36.3 (b)	-	(23)	(153)
NDF – Pounds Sterling x Dollar - 36.3 (b)	9	20	(8)
Swap CDI x Dollar - 36.3 (c)	(3)	(284)	7
Others	1	(2)	6
	(78)	(278)	(166)
Interest rate derivatives			
Swap - CDI X IPCA	(41)	(36)	6
	(41)	(36)	6
Cash flow hedge on exports (*)	(4,585)	(4,720)	(3,136)
Recognized in Net finance income (expense)	(4,704)	(5,034)	(3,296)
Total	(4,783)	(5,342)	(3,666)

(*) As presented in note 29.3

	Guarantees given as collateral	
	12.31.2021	12.31.2020
Commodity derivatives	15	13
Currency derivatives	27	78
Total	42	91

A sensitivity analysis of the derivative financial instruments for the different types of market risks as of December 31, 2021 is set out as follows:

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Financial Instruments	Risk	Probable Scenario (*)	Reasonably possible scenario (*)	Remote Scenario (*)
Derivatives not designated for hedge accounting				
Future and forward contracts	Crude oil and oil products - price changes	-	(23)	-47
Future and forward contracts	Soybean oil - price changes	-	(8)	-17
Non-deliverable forwards (NDF)	Foreign currency - depreciation BRL x USD	-	(8)	(16)
		-	(39)	(80)

(*) The probable scenario was computed based on the fair value of oil and oil products prices at December 31, 2021. Reasonably possible and remote scenarios consider 25% and 50% deterioration in the associated risk variables, respectively.

The probable scenario uses market references, used in pricing models for oil, oil products and natural gas markets, and takes into account the closing price of the asset on December 31, 2021. Therefore, no variation is considered arising from outstanding operations in this scenario. The reasonably possible and remote scenarios reflect the potential effects on the statement of income from outstanding transactions, considering a variation in the closing price of 25% and 50%, respectively. To simulate the most unfavorable scenarios, the variation was applied to each asset according to open transactions: price decrease for long positions and increase for short positions.

36.2. 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.

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 at that time, 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 (swap) 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) 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.

36.3. 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.

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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 pounds 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.

a) Cash Flow Hedge involving the Company's future exports

The carrying amounts, the fair value as of December 31, 2021, 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\$ 5.5805 exchange rate are set out below:

Hedging Instrument		Hedged Transactions	Nature of the Risk	Maturity Date	Present value of hedging instrument notional value at 12.31.2021 US\$ million	R\$ million
Foreign exchange gains and losses on proportion of non-derivative financial instruments cash flows		Foreign exchange gains and losses of highly probable future monthly exports revenues	Foreign Currency – Real vs U.S. Dollar Spot Rate	January 2022 to December 2031	72,640	405,370
Changes in the present value of hedging instrument notional value						
Amounts designated as of January 1, 2021					61,502	319,608
Additional hedging relationships designated, designations revoked and hedging instruments re-designated					40,924	224,721
Exports affecting the statement of income					(14,354)	(77,269)
Principal repayments / amortization					(15,432)	(83,366)
Foreign exchange variation					-	21,676
Amounts designated as of December 31, 2021					72,640	405,370
Nominal value of hedging instrument (finance debt and lease liability) at December 31, 2021					84,083	469,225

According to the 2022-2026 Strategic Plan, there is an increase in expected exports, mainly as a result of the increase in Brent prices and, consequently, an increase in the value of highly probable future exports. As a result, the net exposure Dollar/Real observed during 2021 is reduced as of December 31, 2021, as presented in item (c) below.

In the year ended December 31, 2021, the Company recognized a US\$ 15 gain within foreign exchange gains (losses) due to ineffectiveness (a US\$ 1 loss in the same period 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, 2021 is set out below:

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	Exchange rate variation	Tax effect	Total
Balance at January 1,2020	(20,517)	6,977	(13,540)
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 or not occurred	548	(187)	361
Balance at December 31, 2020	(37,257)	12,667	(24,590)
Recognized in Other comprehensive income	(3,949)	1,343	(2,606)
Reclassified to the statement of income - occurred exports	4,585	(1,557)	3,028
Balance at December 31, 2021	(36,621)	12,453	(24,168)

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 2022-2026, would not indicate a reclassification 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, 2021 is set out below:

	2022	2023	2024	2025	2026	2027	2028 a 2031	Total
Expected realization	(8,460)	(6,908)	(5,390)	(3,824)	(3,384)	(3,475)	(5,180)	(36,621)

Accounting policy for hedge accounting

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.

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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.

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.

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 Pound/U.S. Dollar exposure arising from bonds issued amounting to £ 1,300.

After the repurchase of bonds, the current notional amount is £ 1,025.

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 order to reduce its euro x dollar and pounds sterling x dollar exposures raised by bonds issued.

The net notional amount of derivatives originally contracted were reduced to € 2,245 million and 164 million pounds sterling, respectively, in line with a lower exposure to the euro, provided by the repurchase of bonds in that currency throughout 2019.

As of December 31, 2020, net notional amount of pounds sterling x dollar derivative changed to 354 million pounds sterling, while the position in euros was terminated.

Swap contracts – IPCA x 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, in the total notional amount of US\$ 367 for IPCA x CDI operations, maturing in September 2029 and September 2034, and US\$ 240 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. The parallel shock was estimated from the average term of swap contracts (25% of the future interest rate). A sensitivity analysis on CDI through a parallel shock keeping all other variables remaining constant, would result in the impacts shown in the following table:

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Sensitivity Analysis		Result
Parallel increase of 300 basis points		(7)
Parallel reduction of 300 basis points		21

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 reasonably possible and remote scenarios (25% and 50% changes in the foreign exchange rates prevailing on December 31, 2021, respectively), except for assets and liabilities of foreign subsidiaries, when transacted in a currency equivalent to their respective functional currencies. This analysis only covers the exchange rate variation and maintains all other variables constant.

Financial Instruments	Exposure at 12.31.2021	Risk	Probable Scenario (*)	Reasonably possible Scenario (**)	Remote Scenario (**)
Assets	4,487		-	1,122	2,243
Liabilities	(92,548)	Dollar/Real	8	(23,137)	(46,274)
Exchange rate - Cross currency swap	(539)		-	(135)	(270)
Cash flow hedge on exports	72,641		(6)	18,160	36,320
	(15,959)		2	(3,990)	(7,981)
Assets	2	Euro/Real	-	1	1
Liabilities	(18)		-	(5)	(9)
	(16)		-	(4)	(8)
Assets	1,247	Euro/Dollar	(14)	312	624
Liabilities	(2,472)		27	(618)	(1,236)
	(1,225)		13	(306)	(612)
Assets	2	Pound/Real	-	1	1
Liabilities	(22)		-	(6)	(11)
	(20)		-	(5)	(10)
Assets	1,909	Pound/Dollar	(1)	477	955
Liabilities	(3,685)		2	(921)	(1,843)
Derivative - cross currency swap	1,381		(1)	345	691
	(395)		-	(99)	(197)
Total at December 31, 2021	(17,615)		15	(4,404)	(8,808)

(*) At December 31, 2021, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar - a 0% depreciation of the Real; Euro x U.S. Dollar: a 1.1% depreciation of the Euro; Pounds Sterling x U.S. Dollar: a 0.5% depreciation of the Pounds Sterling; Real x Euro: a 1.1% depreciation of the Real; and Real x Pounds Sterling - a 0.1% depreciation of the Real. Source: Focus and Thomson Reuters.

(**) Reasonably possible and remote scenarios consider 25% and 50% change in the foreign exchange rates prevailing on December 31, 2021, respectively.

36.4. 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.

The sensitivity analysis of interest rate risk presented in the table below is carried out for a 12-month term. Amounts referring to reasonably possible and remote scenarios mean the total floating interest expense if there is a variation of 25% and 50% in these interest rates, respectively, maintaining all other variables constant.

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Risk	Probable Scenario (*)	Reasonably possible Scenario (*)	Remote Scenario (*)
LIBOR 1M	-	-	-
LIBOR 3M	2	3	3
LIBOR 6M	333	376	419
CDI	128	160	192
TJLP	57	71	85
IPCA	82	102	122
	602	712	821

(*) The probable scenario was calculated considering the quotations of currencies and floating rates to which the debts are indexed.

36.5. 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 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; and
- revolving credit facilities with several financial institutions.

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.

36.6. 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.

36.6.1. 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.

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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	
	12.31.2021	12.31.2020	12.31.2021	12.31.2020
AA	1,152	1,995	-	-
A	1,145	2,363	-	-
BBB	2,308	168	-	-
BB	3,672	4,154	-	-
AAA.br	530	673	694	652
AA.br	1,639	1,960	-	43
Other ratings	21	398	-	8
	10,467	11,711	694	703

37. 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:

- Competitiveness: prices and conditions of services compatible with those practiced in the market;
- Compliance: adherence to the contractual terms and responsibilities practiced by the Company;
- Transparency: adequate reporting of the agreed conditions, as well as their effects on the company's financial statements;
- Fairness: establishment of mechanisms that prevent discrimination or privileges and the adoption of practices that ensure the non-use of privileged information or business opportunities for the benefit of individuals or third parties; and
- Commutability: arm's length basis.

The Audit Committee must approve in advance transactions between the Company and the Brazilian Federal Government, including its agencies or similar bodies; Petros Foundation; Petrobras Health Association; controlled and associated entities (including entities controlled by its associates); and entities controlled by key management personnel or by their close family members, taking into account the materiality established by this policy. The Audit Committee (CAE) reports monthly to the Board of Directors.

Transactions with the Brazilian Federal Government, including its agencies or similar bodies and controlled entities (the latter when classified as out of the Company's normal course of business by the CAE), which are under the scope of Board of Directors approval, must be preceded by the CAE 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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37.1. 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:

	12.31.2021		12.31.2020	
	Assets	Liabilities	Assets	Liabilities
Joint ventures and associates				
BR Distribuidora, current Vibra Energia	-	-	196	39
Natural Gas Transportation Companies	-	-	74	191
State-controlled gas distributors (joint ventures)	255	42	225	68
Petrochemical companies (associates)	26	12	17	9
Other associates and joint ventures	104	13	152	120
Subtotal	385	67	664	427
Brazilian government – Parent and its controlled entities				
Government bonds	1,446	-	1,632	-
Banks controlled by the Brazilian Government	8,417	1,267	7,676	3,707
Receivables from the Electricity sector	-	-	205	-
Petroleum and alcohol account - receivables from the Brazilian Government	506	-	482	-
Brazilian Federal Government – dividends	2	-	2	-
Others	26	54	38	47
Subtotal	10,397	1,321	10,035	3,754
Pension plans	51	61	52	65
Total	10,833	1,449	10,751	4,246
Current	2,110	315	2,663	1,225
Non-Current	8,723	1,134	8,088	3,021
Total	10,833	1,449	10,751	4,246

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The income/expenses of significant transactions are set out in the following table:

	2021	2020	2019
Joint ventures and associates			
BR Distribuidora, current Vibra Energia	7,936	11,038	7,242
Natural Gas Transportation Companies	(308)	(1,478)	(1,858)
State-controlled gas distributors (joint ventures)	2,410	1,723	2,812
Petrochemical companies (associates)	3,553	2,769	2,926
Other associates and joint ventures	418	265	208
Subtotal	14,009	14,317	11,330
Brazilian government – Parent and its controlled entities			
Government bonds	64	41	107
Banks controlled by the Brazilian Government	(157)	(456)	(652)
Receivables from the Electricity sector	131	72	300
Petroleum and alcohol account - receivables from the Brazilian Government	58	235	8
Brazilian Federal Government - dividends	31	(4)	(4)
Empresa Brasileira de Administração de Petróleo e Gás Natural – Pré-Sal Petróleo S.A. –	(139)	(135)	(110)
Others	(34)	(15)	(130)
Subtotal	(46)	(262)	(481)
Pension plans			
Total	13,963	13,878	10,849
Revenues, mainly sales revenues	14,672	16,202	13,748
Purchases and services	(494)	(2,074)	(2,591)
Income (expenses)	(315)	(93)	–
Foreign exchange and inflation indexation charges, net	(59)	(102)	(395)
Finance income (expenses), net	159	(55)	87
Total	13,963	13,878	10,849

On December 29, 2021, the Company signed five new contracts with the associate Braskem for the sale and purchase of petrochemical products. These contracts amount to US\$ 7.5 billion, equivalent to the remaining values of the prior contracts that were canceled. The new contracts are effective from January 1, 2022 with maturities between May 2026 and December 2029.

Information on the *precatorias* (judicialized debts from the Brazilian Federal Government) issued in favor of the Company arising from the petroleum and alcohol accounts is disclosed in note 13.1.

The liability related to pension plans of the Company's employees and managed by the Petros Foundation, including debt instruments, is presented in note 17.

Petrobras agreement with Amazonas Energia

On April 7, 2021, Petrobras and its subsidiaries Breitener Tambaqui S.A. and Breitener Jaraqui S.A. signed a legal agreement with Amazonas Energia S.A. (debtor) and Centrais Elétricas Brasileiras S.A. - Eletrobras (jointly responsible), in the amount of US\$ 77 (R\$ 438 million), for the receipt of amounts relating to seven lawsuits, which will be suspended until the full settlement of the negotiated credits. The debt will be settled in 60 installments updated based on 124.75% of the CDI interest rate, from January 18, 2021 until full settlement.

The signing of the agreement generated a positive effect on the Company's statement of income in the second quarter of 2021 of US\$ 59 (R\$ 329 million), net of tax effects, since these receivables had already been written-off in previous years. In November 2021, the Company sold its entire interest in Breitener as set out in explanatory note 31.

37.2. 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).

The compensation of employees (including those occupying managerial positions) and officers in December 2021 and December 2020 were:

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Compensation of employees, excluding officers (amounts in U.S. dollars)	2021	2020
Lowest compensation	678	614
Average compensation	3,775	3,617
Highest compensation	19,220	18,799
Compensation of highest paid Petrobras officer	21,642	20,700

The total compensation of Executive Officers and Board Members of Petrobras is set out as follows:

	Jan-Dec/2021			Jan-Dec/2020		
	Executive Officers	Board of Directors	Total	Executive Officers	Board of Directors	Total
Wages and short-term benefits	2.6	0.1	2.7	2.8	0.1	2.9
Social security and other employee-related taxes	0.7	-	0.7	0.9	-	0.9
Post-employment benefits (pension plan)	0.3	-	0.3	0.2	-	0.2
Variable compensation	2.5	-	2.5	2.4	-	2.4
Benefits due to termination of tenure	0.6	-	0.6	0.1	-	0.1
Total compensation recognized in the statement of income	6.7	0.1	6.8	6.4	0.1	6.5
Total compensation paid (*)	6.0	0.1	6.1	4.8	-	4.8
Average number of members in the period (**)	9.00	10.58	19.58	9.00	10.00	19.00
Average number of paid members in the period (***)	9.00	4.50	13.50	9.00	4.42	13.42

(*) The variable compensation (PPP) paid to management is included in the Executive Officers columns.

(**) Monthly average number of members.

(***) Monthly average number of paid members.

In 2021, expenses related to compensation of the board members and executive officers of Petrobras amounted to US\$ 15 (US\$ 14 for the same period of 2020).

On April 14, 2021, the Company's Annual Shareholders' Meeting set the threshold for the overall compensation for executive officers and board members at US\$ 8 (R\$ 47.06 million) from April 2021 to March 2022.

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\$ 544 thousand for the year ended December 31, 2021 (US\$ 642 thousand with tax and social security costs). For the same period of 2020, the total compensation concerning these members was US\$ 441 thousand (US\$ 529 thousand with tax and social security costs).

The Variable Compensation Program for Executive Officers is subject to compliance with prerequisites and performance indicators. The variable remuneration to be paid changes according to the percentage of goals achievement and its payment is deferred in 5 years.

In 2021, the Company provisioned US\$ 3 referring to the Performance Award Program – PPP 2021 for Executive Directors.

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 due to claims, inquiries, investigations and administrative, arbitration or judicial proceedings in Brazil or in any other jurisdiction, which aim to impute any responsibility for regular acts of management performed exclusively in the exercise of its activities since the date of your possession or 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 Directors and Officers (D&O) 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; (vi) other cases provided for in the indemnity contract; (vii) 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, 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.

38. Supplemental information on statement of cash flows

	2021	2020	2019
Amounts paid/received during the year:			
Withholding income tax paid on behalf of third-parties	904	770	1,165
Transactions not involving cash			
Purchase of property, plant and equipment on credit	-	310	76
Lease	6,945	4,255	2,301
Provision/(reversals) for decommissioning costs	(1,082)	5,174	5,497
Use of deferred tax and judicial deposit for the payment of contingency	1,173	2	3
Assets received due to assumption of participation in concessions	165	-	-
Receivables from Búzios Agreement	54	-	-

39. Subsequent events

Sale of Potiguar group of fields and related assets

On January 31, 2022, Petrobras signed with the company 3R Potiguar SA, a wholly-owned subsidiary of 3R Petroleum Óleo e Gás SA, a contract for the sale of its entire interest (100%) in a set of 22 production onshore and shallow water field concessions, together with its associated infrastructure, located in the Potiguar Basin, in the state of Rio Grande do Norte, jointly called the Potiguar group of fields.

This sale amounts to US\$ 1,385, of which (a) US\$ 110 was received on the transaction signing; (b) US\$ 1,040 to be received at the closing of the transaction and (c) US\$ 235 to be paid in 4 annual installments of US\$ 58.75, starting in

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March 2024. The contract provides for price adjustments until the closing of the transaction, and it is also subject to the fulfillment of conditions precedent, such as approval by the ANP.

Sale of Alagoas group of fields and related assets

On February 4, 2022, Petrobras closed the sale of Alagoas group of fields to Origin Energia S.A. (formerly Petro+), with the sale of its entire interest (100%) in seven concessions, six onshore (Anambé, Arapaçu, Cidade de São Miguel dos Campos, Furado, Pilar and São Miguel dos Campos) and one in shallow water (Paru field), jointly called the Alagoas Pole.

This sale amounts to US\$ 300, with US\$ 60 received on the transaction signing and US\$ 240 at the transaction closing.

Minimum compensation based on employee's position and work schedule - RMNR

In February 2022, the judgment of the appeals filed by the plaintiff and several amicus curiae was started. The judgment is currently underway in the First Panel of the Supreme Federal Court, with 3 votes in favor of the Company, confirming that there is an understanding of recognizing the merit of the collective bargaining agreement signed between Petrobras and the unions. Considering that the last minister to vote requested additional time for analysis, the trial was suspended, and is pending the presentation of the vote by this last minister.

Additional information on the subject is presented in Note 18.

Partial prepayment to Petros

On February 22, 2022, the Company's Board of Directors approved the partial prepayment of the Term of Financial Commitment relating to the plans PPSP-R Pre-70 and PPSP-NR Pre-70, and of the Term of Financial Commitment relating to the Pension Difference, entered into with the Petros Foundation, in the amount of US\$ 1,233 (R\$ 6,882 million), scheduled to occur on February 25, 2022.

Both commitments are recorded in these financial statements, within the actuarial liability amount (note 17).

Sale of Norte Capixaba group of fields

On February 22, 2022, the Company's Board of Directors approved the sale of its entire interest (100%) in a set of four onshore production fields, with integrated facilities, located in the state of Espírito Santo, jointly called Norte Capixaba group of fields, to Seacrest Petróleo SPE Norte Capixaba Ltda., a wholly-owned subsidiary of Seacrest Exploração e Produção de Petróleo Ltda..

This sale amounts to US\$ 478, of which (a) US\$ 36 was paid at the contract signing; (b) US\$ 442 to be paid at the transaction closing. In addition, there are up to US\$ 66 in contingent payments provided for in the contract, depending on future Brent prices. The agreement provides for price adjustments and to the fulfillment of conditions precedent, such as the approval by the ANP.

Transfer of participation in the Búzios field

On March 4, 2022, Petrobras signed an agreement with its partner CNOOC Petroleum Brasil Ltda. (CNOOC) for the transfer of 5% of its interest in the Production Sharing Contract for the Surplus Volume of the Transfer of Rights Agreement of the Búzios field, in the pre-salt layer of the Santos basin. The agreement results from the call option exercised by CNOOC on September 29, 2021.

The amount to be received by Petrobras at the closing of the operation is US\$ 2,120, referring to the compensation and reimbursement of the signature bonus of CNOOC's additional interest, subject to price adjustments and to the fulfillment of conditions precedent, such as CADE, ANP and Ministry of Mines and Energy (MME) approval.

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After the transaction becomes effective, Petrobras will hold an 85% interest in the Production Sharing Contract of the Surplus Volume of the Transfer of Rights Agreement of the Búzios field, CNOOC will hold a 10% interest and CNODC Brasil Petróleo e Gás Ltda. a 5% interest. The total participation in this Búzios Co-participation Agreement, including the portions of the Transfer of Rights Agreement and of the BS-500 Concession Agreement (100% of Petrobras) will be 88.99% of Petrobras, 7.34% of CNOOC and 3.67% of CNODC.

Diligence on the sale of the REMAN refinery

On March 8, 2022, CADE published a statement declaring the Act of Concentration to be complex and ordering the execution of diligence concerning the sale process of REMAN refinery to Ream Participações S.A., which was signed in August 2021.

The Act of Concentration process requires diligence related to the further analysis of the operation and its effects on the downstream refining markets and possible competitive impacts, and the conclusion of this process is expected to occur between 240 and 330 days as from November 2021.

Petrobras will continue to collaborate with CADE in order to obtain the approval of the transaction within the legal deadline.

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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, 2021, 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 26, the Company uses the successful efforts method of accounting for appraisal and development costs of crude oil and natural gas production. In addition, notes 23 and 24 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					
	Abroad					
	Brazil	South America	Others	Total	Total	Equity Method Investees
December 31, 2021						
Unproved oil and gas properties	4,455	115	-	115	4,570	-
Proved oil and gas properties	80,523	172	-	172	80,695	832
Support Equipment	67,988	777	1	778	68,766	-
Gross Capitalized costs	152,967	1,064	1	1,065	154,032	832
Depreciation, depletion and amortization	(51,621)	(733)	(1)	(734)	(52,355)	(296)
Net capitalized costs	101,345	331	-	331	101,677	536
December 31, 2020						
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)
Net capitalized costs	109,486	326	-	326	109,812	476
December 31, 2019						
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)
Net capitalized costs	141,081	359	-	359	141,441	2,513

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(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	Others	Total			
December 31, 2021							
Acquisition costs:							
Proved	-	-	-	-	-	-	
Unproved	-	-	-	-	-	-	
Exploration costs	682	5	-	5	687	-	
Development costs	6,035	44	-	44	6,079	37	
Total	6,717	49	-	49	6,766	37	
December 31, 2020							
Acquisition costs:							
Proved	315	-	-	-	315	-	
Unproved	24	-	-	-	24	-	
Exploration costs	805	10	-	10	815	-	
Development costs	5,664	3	-	3	5,667	57	
Total	6,808	13	-	13	6,821	57	
December 31, 2019							
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	
Total	24,558	17	-	17	24,575	153	

(*) Mainly acquisition of oil exploration rights – Transfer of Rights, according to note 24.1.

(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, 2021, 2020 and 2019 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.

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(Expressed in millions of US Dollars, unless otherwise indicated)

	Consolidated entities						
	Abroad						
	Brazil	South America	North America	Others	Total	Total	Equity Method Investees
December 31, 2021							
Net operation revenues:							
Sales to third parties	974	131	-	-	131	1,105	220
Intersegment	54,479	-	-	-	-	54,479	-
	55,453	131	-	-	131	55,584	220
Production costs	(14,601)	(67)	-	-	(67)	(14,668)	(44)
Exploration expenses	(685)	(2)	-	-	(2)	(687)	-
Depreciation, depletion and amortization	(8,959)	(46)	-	-	(46)	(9,005)	(38)
Impairment of oil and gas properties	3,107	-	-	-	-	3,107	-
Other operating expenses	852	15	114	(118)	11	863	(17)
Results before income tax expenses	35,167	31	114	(118)	27	35,194	121
Income tax expenses	(11,957)	(11)	(39)	40	(10)	(11,967)	(41)
Results of operations (excluding corporate overhead and interest costs)	23,210	20	75	(78)	17	23,227	80
December 31, 2020							
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
Results of operations (excluding corporate overhead and interest costs)	4,786	(7)	(110)	(17)	(134)	4,652	(80)
December 31, 2019							
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)
Results of operations (excluding corporate overhead and interest costs)	12,775	33	27	(309)	(249)	12,526	443

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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 2021, 2020 and 2019 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		
	Crude oil in Brazil	Crude Oil in South America	Synthetic Oil in Brazil	Consolidated Total	Crude Oil in North America	Crude Oil in Africa	Total
Reserves at December 31, 2018 (1)	8,169	2	5	8,175	27	60	8,262
Revisions of previous estimates	719	–	–	719	1	(7)	713
Extensions and discoveries	18	–	4	21	–	1	22
Improved Recovery	–	–	–	–	–	–	–
Sales of reserves	(68)	–	–	(68)	–	–	(68)
Purchases of reserves	–	–	–	–	–	–	–
Production for the year	(754)	–	(1)	(755)	(5)	(12)	(772)
Reserves at December 31, 2019 (1)	8,083	1	8	8,092	23	42	8,156
Revisions of previous estimates	269	(1)	(7)	261	–	–	261
Extensions and discoveries	35	–	–	35	–	–	35
Improved Recovery	–	–	–	–	–	–	–
Sales of reserves	(61)	–	–	(61)	–	(41)	(102)
Purchases of reserves	–	–	–	–	–	–	–
Production for the year	(792)	–	(1)	(793)	(4)	(1)	(798)
Reserves at December 31, 2020	7,534	–	–	7,534	18	–	7,552
Extensions and discoveries	–	–	–	–	–	–	–
Revisions of previous estimates	1,654	2	11	1,667	1	–	1,668
Sales of reserves	(9)	–	–	(9)	–	–	(9)
Production for the year	(773)	–	(1)	(774)	(3)	–	(777)
Reserves at December 31, 2021	8,406	2	10	8,419	17	–	8,435

(1) In 2018, total proved reserves includes 60 million barrels related to PO&G assets held for sale. In 2019, total proved reserves include 42 million barrels of assets held for sale (PO&G).

(*) 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	Synthetic Gas in Brazil	Consolidated Total	Gas Natural in North America	Gas Natural in Africa		
Reserves at December 31, 2018 (1)	7,790	214	6	8,010	11	47		8,068
Revisions of previous estimates	1,416	(42)	–	1,373	–	11	1,384	
Extensions and discoveries	15	–	8	23	–	–	–	23
Improved Recovery	–	–	–	–	–	–	–	–
Sales of reserves	(24)	–	–	(24)	–	–	–	(24)
Purchases of reserves	–	–	–	–	–	–	–	–
Production for the year	(817)	(16)	(1)	(834)	(2)	(11)	(847)	
Reserves at December 31, 2019 (1)	8,381	156	12	8,549	9	47		8,605
Revisions of previous estimates	(93)	(119)	(11)	(222)	–	–	–	(222)
Extensions and discoveries	36	–	–	36	–	–	–	36
Improved Recovery	–	–	–	–	–	–	–	–
Sales of reserves	(42)	–	–	(42)	–	(47)	(90)	
Purchases of reserves	–	–	–	–	–	–	–	–
Production for the year	(735)	(12)	(1)	(749)	(2)	–	–	(750)
Reserves at December 31, 2020	7,547	26	–	7,572	8	–		7,580
Extensions and discoveries	–	–	–	–	–	–	–	–
Revisions of previous estimates	1,615	167	19	1,802	–	–	–	1,802
Sales of reserves	(15)	–	–	(15)	–	–	–	(15)
Production for the year	(692)	(16)	(1)	(709)	(1)	–	–	(710)
Reserves at December 31, 2021	8,455	177	18	8,650	7	–		8,657

(1) In 2018, total proved reserves includes 47 billion cubic feet related to Africa assets held for sale. In 2019, total proved reserves includes 47 billion cubic feet related to Africa assets held for sale.

(*) 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 36% of our total proved reserves of natural gas as of December 31, 2021.

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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 2021, 2020 and 2019:

Proved developed and undeveloped reserves(*)	Oil equivalent in Brazil	Oil equivalent in South America	Synthetic Oil in Brazil	Consolidated Total	Equity Method Investees		Total
					Oil equivalent in North America	Oil equivalent in Africa	
Reserves at December 31, 2018 (1)	9,467	37	6	9,510	28	68	9,606
Revisions of previous estimates	955	(7)	–	948	1	(5)	944
Extensions and discoveries	20	–	5	25	–	1	26
Improved Recovery	–	–	–	–	–	–	–
Sales of reserves	(72)	–	–	(72)	–	–	(72)
Purchases of reserves	–	–	–	–	–	–	–
Production for the year	(890)	(3)	(1)	(894)	(5)	(14)	(913)
Reserves at December 31, 2019 (1)	9,480	27	10	9,517	24	49	9,590
Revisions of previous estimates	253	(21)	(9)	224	–	–	224
Extensions and discoveries	41	–	–	41	–	–	41
Improved Recovery	–	–	–	–	–	–	–
Sales of reserves	(68)	–	–	(68)	–	(49)	(117)
Purchases of reserves	–	–	–	–	–	–	–
Production for the year	(914)	(2)	(1)	(918)	(5)	(1)	(923)
Reserves at December 31, 2020	8,792	5	–	8,796	19	–	8,816
Extensions and discoveries	–	–	–	–	1	–	1
Revisions of previous estimates	1,923	30	14	1,967	2	–	1,969
Sales of reserves	(11)	–	–	(11)	–	–	(11)
Production for the year	(888)	(3)	(1)	(892)	(3)	–	(896)
Reserves at December 31, 2021	9,816	31	13	9,860	18	–	9,878

(1) In 2018, includes 68 million barrels of oil equivalent related to P&G assets held for sale in Africa; and in 2019, includes 49 million barrels of oil equivalent related to assets held for sale in Africa.

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

In 2021, we incorporated 1,969 million boe of proved reserves by revising previous estimates, including:

- (i) addition of 1,376 million boe due to new projects, mainly in Búzios field and in other fields in the Santos and Campos Basins. The new projects in Búzios field were made possible due to the acquisition of the Transfer of Rights Surplus and the approval of Búzios Co-participation Agreement;
- (ii) addition of 429 million boe related to economic revisions, mainly due to the increase in oil prices; and
- (iii) addition of 164 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.

The additions in our proved reserves were partially offset by the reduction of 11 million boe due to sales of proved reserves.

The company's total proved reserve resulted in 9,878 million boe in 2021, considering the variations above and the reduction from 2021 production of 896 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 2020, we incorporated 224 million boe of proved reserves by revising previous estimates, including:

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- (i) addition of 637 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 254 million boe due to approvals of new projects in the Santos and Campos Basins; and
- (iii) reduction of 667 million boe related to economic revisions, mainly due to the decrease in oil prices.

In addition, we added 41 million boe to our proved reserves due to extensions and discoveries in the pre-salt of Santos Basin, and reduced 117 million boe due to sales of proved reserves.

The company's total proved reserve resulted in 8,816 million boe in 2020, considering the variations above and the reduction from 2020 production of 923 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 944 million boe of reserves proved by revisions of previous estimates, composed of:

- (i) addition of 529 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 267 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 243 million boe due to the approval of new projects in the Santos, Campos and Espírito Santo Basins; and
- (iv) a 95 million boe reduction due to economic revisions, mainly due to the price reduction.

We also incorporated 26 million boe into our proved reserves due to discoveries and extensions, mainly in the Santos Basin pre-salt, and reduced 72 million boe from our proved reserves due to proved reserve sales.

Considering the production of 913 million boe in 2019 and the variations above, the company's total proved reserve resulted in 9,590 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.

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The tables below present the volumes of proved developed and undeveloped reserves, net, that is, reflecting Petrobras' participation:

	2019				
	Crude Oil (mmbbl)	Synthetic Oil (bncf)	Natural Gas (bncf)	Synthetic Gas (bncf)	Total oil and gas (mmboe)
Net proved developed reserves (*):					
Consolidated Entities					
Brazil	4,999	8	5,716	12	5,961
South America, outside Brazil (2)	1	-	67	-	12
Total Consolidated Entities	5,000	8	5,783	12	5,973
Equity Method Investees					
North America (2)	18	-	7	-	19
Africa	37	-	45	-	45
Total Equity Method Investees	55	-	52	-	64
Total Consolidated and Equity Method Investees (1)	5,055	8	5,834	12	6,037
Net proved undeveloped reserves (*):					
Consolidated Entities					
Brazil	3,084	-	2,665	-	3,528
South America, outside Brazil (2)	1	-	89	-	15
Total Consolidated Entities	3,084	-	2,754	-	3,543
Equity Method Investees					
North America (2)	4	-	2	-	5
Africa	4	-	2	-	5
Total Equity Method Investees	9	-	5	-	10
Total Consolidated and Equity Method Investees (1)	3,093	-	2,759	-	3,553
Total proved reserves (developed and undeveloped)	8,148	8	8,593	12	9,590

(1) It includes amounts related to assets held for sale (37 million barrels of oil and 45 billion cubic feet of natural gas in net proved developed reserves and 4 million barrels of oil and 2 billion cubic feet of natural gas in net proved undeveloped reserves) in Africa (PO&G).

(2) South America oil reserves includes 20% of natural gas liquid (NGL) in proved developed reserves and 59% of NGL in proved undeveloped reserves. North America oil reserves includes 4 % of natural gas liquid (NGL) in proved developed reserves and 5% of NGL in proved undeveloped reserves.

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

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	2020				
	Crude Oil (mmbbl)	Synthetic Oil (mmbbl)	Natural Gas (bncf)	Synthetic Gas (bncf)	Total oil and gas (mmboe)
Net proved developed reserves (*):					
Consolidated Entities					
Brazil	4,858	-	5,714	-	5,810
South America, outside Brazil (1)	-	-	26	-	5
Total Consolidated Entities	4,858	-	5,740	-	5,815
Equity Method Investees					
North America (1)	17	-	7	-	18
Total Equity Method Investees	17	-	7	-	18
Total Consolidated and Equity Method Investees	4,875	-	5,747	-	5,833
Net proved undeveloped reserves (*):					
Consolidated Entities					
Brazil	2,676	-	1,833	-	2,982
South America, outside Brazil (1)	-	-	-	-	-
Total Consolidated Entities	2,676	-	1,833	-	2,982
Equity Method Investees					
North America (1)	1	-	1	-	1
Total Equity Method Investees	1	-	1	-	1
Total Consolidated and Equity Method Investees	2,678	-	1,833	-	2,983
Total proved reserves (developed and undeveloped)	7,552	-	7,580	-	8,816

(1) South America oil reserves includes 21% of natural gas liquid (NGL) in proved developed reserves. North America oil reserves includes 6% of natural gas liquid (NGL) in proved developed reserves and 5% of NGL in proved undeveloped reserves.

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

	2021				
	Crude Oil (mmbbl)	Synthetic Oil (mmbbl)	Natural Gas (bncf)	Synthetic Gas (bncf)	Total oil and gas (mmboe)
Net proved developed reserves (*):					
Consolidated Entities					
Brazil	4,711	10	5,591	18	5,656
South America, outside Brazil (1)	1	-	79	-	14
Total Consolidated Entities	4,712	10	5,670	18	5,670
Equity Method Investees					
North America (1)	15	-	6	-	16
Total Equity Method Investees	15	-	6	-	16
Total Consolidated and Equity Method Investees	4,727	10	5,676	18	5,686
Net proved undeveloped reserves (*):					
Consolidated Entities					
Brazil	3,695	-	2,865	-	4,173
South America, outside Brazil (1)	1	-	98	-	17
Total Consolidated Entities	3,696	-	2,963	-	4,190
Equity Method Investees					
North America (1)	2	-	1	-	2
Total Equity Method Investees	2	-	1	-	2
Total Consolidated and Equity Method Investees	3,698	-	2,964	-	4,192
Total proved reserves (developed and undeveloped)	8,425	10	8,640	18	9,878

(1) South America oil reserves includes 24% of natural gas liquid (NGL) in proved developed reserves and 24% of NGL in proved undeveloped reserves. North America oil reserves includes 2% of natural gas liquid (NGL) in proved developed reserves and 3% of NGL in proved undeveloped reserves.

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

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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.

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Standardized measure of discounted future net cash flows:

	Consolidated entities					
	Abroad					Equity Method Investees (2)
	Brazil	South America	North America	Total	Total	
December 31, 2021						
Future cash inflows	612,924	587	-	587	613,511	1,129
Future production costs	(264,158)	(261)	-	(261)	(264,419)	(329)
Future development costs	(44,027)	(107)	-	(107)	(44,134)	(28)
Future income tax expenses	(104,568)	(61)	-	(61)	(104,628)	-
Undiscounted future net cash flows	200,171	159	-	159	200,330	772
10 percent midyear annual discount for timing of estimated cash flows (1)	(85,391)	(70)	-	(70)	(85,461)	(303)
Standardized measure of discounted future net cash flows	114,780	89	-	89	114,869	470
December 31, 2020						
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)
Standardized measure of discounted future net cash flows	45,978	1	-	1	45,979	74
December 31, 2019						
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)
Undiscounted future net cash flows	143,049	152	-	152	143,200	1,743
10 percent midyear annual discount for timing of estimated cash flows (1)	(54,928)	(83)	-	(83)	(55,010)	(332)
Standardized measure of discounted future net cash flows	88,121	69	-	69	88,190	1,412

(1) Semiannual capitalization

(2) It includes the amount of US\$ 1,047 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.

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Changes in discounted net future cash flows:

	Consolidated entities				Equity Method Investees (1)
	Abroad			Total	
	Brazil	South America	North America	Total	
Balance at January 1, 2021	45,978	1	-	1	45,979
Sales and transfers of oil and gas, net of production cost	(38,074)	(43)	-	(43)	(38,117)
Development cost incurred	6,035	44	-	44	6,079
Net change due to purchases and sales of minerals in place	(246)	-	-	-	(246)
Net change due to extensions, discoveries and improved recovery related costs	-	-	-	-	10
Revisions of previous quantity estimates	41,211	205	-	205	41,416
Net change in prices, transfer prices and in production costs	108,268	58	-	58	108,326
Changes in estimated future development costs	(19,900)	(119)	-	(119)	(20,019)
Accretion of discount	4,598	-	-	-	4,598
Net change in income taxes	(33,089)	(47)	-	(47)	(33,136)
Other - unspecified	-	(9)	-	(9)	(9)
Balance at December 31, 2021	114,780	89	-	89	114,869
Balance at January 1, 2020	88,121	69	-	69	88,190
Sales and transfers of oil and gas, net of production cost	(24,908)	(14)	-	(14)	(24,922)
Development cost incurred	5,664	3	-	3	5,666
Net change due to purchases and sales of minerals in place	(847)	-	-	-	(847)
Net change due to extensions, discoveries and improved recovery related costs	509	-	-	-	509
Revisions of previous quantity estimates	3,160	(35)	-	(35)	3,125
Net change in prices, transfer prices and in production costs	(54,606)	(145)	-	(145)	(54,751)
Changes in estimated future development costs	(4,716)	97	-	97	(4,618)
Accretion of discount	8,812	9	-	9	8,821
Net change in income taxes	24,788	24	-	24	24,812
Other - unspecified	-	(7)	-	(7)	(7)
Balance at December 31, 2020	45,978	1	-	1	45,979
Balance at January 1, 2019	111,121	185	-	185	111,305
Sales and transfers of oil and gas, net of production cost	(34,522)	(65)	-	(65)	(34,587)
Development cost incurred	6,819	6	-	6	6,826
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
Net change in prices, transfer prices and in production costs	(34,114)	(145)	-	(145)	(34,259)
Changes in estimated future development costs	(5,324)	60	-	60	(5,265)
Accretion of discount	11,112	25	-	25	11,137
Net change in income taxes	15,714	41	-	41	15,755
Other - unspecified	-	7	-	7	(249)
Balance at December 31, 2019	88,121	69	-	69	88,190

(1) It includes the amount of US\$ 1,675 related to P&G assets classified as held for sale at January 1st, 2019. Includes the amount of US\$ 1,047 related to P&G assets classified as held for sale at December 31, 2019.

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



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